THE AMERICAN ENGINEER

Published monthly in the interest of the Engineering Profession by the National Society of Professional Engineers.

VOLUME 16, NUMBER 9 — SEPTEMBER, 1946

ROBERT L. MOFFETT, *Editor*
All editorial material should be sent to the Atlanta or Washington, D. C. Office.

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Business Manager
LEO H. CLEARY

Publication Committee
WILLIAM H. LARKIN, *Chairman*
ALONZO L. JONES
ALLEN HUBBARD

* * *

Publication Office
40 Hilliard St., Atlanta, Ga.

Advertising and Executive Offices
6 Church St., New York 6, N. Y.

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Send change of address to the National Society of Professional Engineers, National Press Building, Washington, D. C. on form 3578.

All correspondence relating to Society membership, subscriptions, etc., should be addressed to the Washington office.

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Subscription Rates

$1.00 per year in advance to members of the National Society of Professional Engineering and its Affiliated Societies. $2.00 per year in advance to non-members in U.S.A. and its possessions and Canada and Mexico. Single copy — 25c. Foreign, $4.00 per year.

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Entered as Second Class Matter March 11, 1942, at the Post Office, New York, under the act of March 3, 1875—application pending for transfer to Atlanta, Georgia.

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THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
Headquarters: National Press Building, Washington, D. C.

Vice-President
JAS. F. FAIRMAN
4 Irving Place
New York, N. Y.

President
RITCHIE LAWRIE, JR.
321 North Front St.
Harrisburg, Pennsylvania

Vice-President
STEPHEN C. HALE
170 Boulevard, S.E.
Atlanta, Georgia

Vice-President
ALEX VAN PRAAG, JR.
447 Standard Office Bldg.
Decatur, Illinois

Treasurer
LEO H. CLEARY
2726 Conn. Ave., N. W.
Washington, D. C.

Executive Director
PAUL H. ROBBINS
937 National Press Bldg.
Washington, D. C.

Vice-President
WILLIAM L. THRAILKILL
1107 W. 7th Avenue
Spokane, Washington

NSPE's Position On Labor Legislation Presented to Congress

—By Our Executive Director

Statement to the Sub-Committee of the House Labor Committee on behalf of the National Society of Professional Engineers. Presented July 18, 1946.

My name is Paul H. Robbins. As Executive Director of the National Society of Professional Engineers I am appearing before you on behalf of that Society to present its thinking regarding Labor Legislation.

The National Society of Professional Engineers is an organization having a membership of over 12,000 registered professional engineers representing all phases of engineering throughout the United States and its territories. It is made up of Member State Societies each being composed of a number of local chapters. To be eligible for membership in the National Society an engineer must have satisfactorily met the professional requirements of a State to practice the profession of engineering.

Existing Law Unsatisfactory

Through its Board of Directors representing each State organization and numerous resolutions which have been addressed to it from its Member State Societies, the National Society of Professional Engineers has repeatedly received indications from its members that for the best interests of professional engineering services to the public some change in existing Labor Legislation is necessary.

In order that appropriate studies and direction can be given to this all-important problem, the National Society has three committees currently studying and making recommendations to the Society as a whole. These committees concern themselves with employment practices among professional engineers; with studies of State and National Legislation; and with the contemplated activities of the National Society in these fields. We therefore welcome this opportunity to present to this Committee the results of these various studies and the general recommendations which have come from them.

It is well to make clear at this point, that while this statement may concern employment practices as a whole the statements which follow are the attitude of the professional engineer in approaching the relationships of employer and employee. Nothing said here should be construed as opposed to the fundamental rights of all employees to bargain collectively.

The Congress of the United States has on a number of occasions in the past, recognized that the problems of professional people differ from those of the large group of employees for whom Labor Legislation primarily was written. They have recognized the conditions of education, experience and resulting work are not measured in terms of production standards, as are other groups of employees. They further recognize that this group is easily determined because of distinctions established by law for the practice of the professions entailed. The wording of the actions of the Congress, however, have been restrictive in that mention is made of doctors and lawyers, and have in the past, failed to include the professional engineer.

States Set Engineering Standards

There have been established, however, by Legislation in 47 of the 48 States and in the three territories of the United States, laws by which the standards for the practice of engineering have been definitely defined. The determinations of the qualifications of individuals are vested in competent State Board of Engineering Examiners. These State Boards are working closely together to establish uniform standards throughout the Country. In all such States the responsibility for engineering work cannot be assumed by anyone not having met the requirements of these State laws. The competence of professional engineers may be judged the same as medical or legal personnel for competency in their respective fields. We therefore request the committee to *give consideration to including the designation of professional engineers in all future labor Legislation* in which the conditions of such Legislation are recognized as not applying to professional personnel.

In addition to the above, there is a second group of engineering employees who are vitally concerned with the aspects of Labor Legislation. This is the group who for one reason or another have not met the requirements for professional qualifications as established by the laws of the various States. However, their interests, conditions of employment and activities are distinct from other categories of personnel.

The committee is requested to so word future Labor Legislation that the following elements will be clearly defined as affecting this group of personnel:

Elements Needing Definition

First, we believe that no engineering employee or group of employees should be required to affiliate or be included in a bargaining unit whose principal representation is composed of other workers with divergent interests and background, and

Second, that any group of engineering employees should have full freedom to form their own bargaining agency; that they have complete and total control over its policies and actions that they have choice of their own representatives in whatever negotiations they desire with their employer.

It is believed that the above objectives are in accord with the intent of Congress as expressed in the Labor Relations Act. Unfortunately, the administration of this Act has on many occasions in the past prevented these objectives from being fully realized, and for this reason, it is felt that careful wording of future Legislation should assure that the above objectives are maintained.

A word of explanation of the above points is perhaps in order. Generally, one of the fundamental rights which every American holds dear is his right to choose employment to his liking and under conditions in which his employment not only brings him a just remuneration, but congenial working conditions. This, we believe is the fundamental intention of Labor Relations Legislation, to insure that individual freedom with respect to choice of job is at no time infringed upon. It is essential that we assure all employees of the right to chose their employment. This should in no way be affected or prejudiced by conditions over which the employee has no control.

To establish as one of the criteria of his employment, the joining of an organization, the objectives of which he does not support, or with whose representations he does not agree, we believe to be fundamentally opposed to his Constitutional right. To require any employee, as a condition of employment, to join a Labor organization, we feel is contrary to the harmonious relationships between an employer and employee which must be accomplished for maximum service by the employee. We therefore believe, that considerable thought should be given during the course of your considerations and to subsequent writings of Legislation to the protection of the individual, that he may have independent thinking and independent choice of his collective bargaining unit.

Engineer's Problems Unique

The prerequisites for employment of Engineering Personnel lead to consideration of Item 1. In the consideration of the scope of activities of the engineer, it is immediately recognized that there are certain qualifications of education, experience and creative work within the field of his employment which set him aside and apart from other emplayees. This means that his interests, his activities, his conditions of employment cannot be grouped with other categories of personnel. Numerous occasions are on record where engineering employees have been grouped together with maintenance, production and clerical workers in collective bargaining activities. This has been primarily because of the administration of present Labor Legislation, but the fact that this has been possible has indicated a weakness in such legislation which should be corrected. The Legislation, we feel, should be so written that engineer personnel will be recognized as having collective bargaining interests distinct and apart from other bargaining groups and that no opportunity will exist whereby they will be absorbed against their wishes into other bargaining units.

The degree of effectiveness of administration of Labor Legislation leads to consideration of Item 2. It is essential that if engineering employees are to be assured the rights indicated above, that the Legislation must be so worded that they may be allowed to choose their own group for collective bargaining purposes, and that that group regardless of its size will be assured of the right to represent those professional personnel in employee-employer relationships, and that such representations will be made by individuals of their own choosing.

Problems of Engineers Not Common to Workers

Again, the work of engineer personnel varies so greatly from that of other groups of workers that the problems for discussion in employer-employee negotiations are in no wise common. Likewise, a representative not of their own choosing is unfamiliar with their own particular requirements and desires and therefore could not adequately represent them in such considerations. The work of the engineer has many facets. It cannot be evaluated in terms of production per hour or volume per period of time. It is impossible to establish measures of production as it is in the case of many other types of work. In the various trades, a man's worth is determined by his production rate. In engineering, a man's worth may be determined by his initiative, his administrative and executive abilities, the ideas he has or by his ability to analyze specific engineering problems, or by the application of principles to problems of varied magnitude and scope.

The qualifications by which such a man is judged are not single, but multiple. Considerable education and training together with experience has gone into the final end result of his employment. These are not matters which can be represented by any group other than one truly representative of his interests and cognizant of his problems and desires. It is essential, therefore, that he be protected in choosing his bargaining agency, as well as his representatives.

The National Society of Professional Engineers is appreciative of this opportunity to present its thinking to this Labor Committee. Its members, its officers and its committees stand ready at any time and would welcome the opportunity to assist the Labor Committee in specific wording or interpretations, or to supply information which would be of value in the drafting of Labor Legislation.

Past President Beretta Married

John W. Beretta

The many friends of past president of NSPE, John W. Beretta, will be happy to learn of his wedding, on July 11th, to Mary Austin Perry Rutherford. The ceremony took place in San Antonio, Texas, where Mr. Beretta has resided for many years.

Mr. Beretta became president of the National Society of Professional Engineers in 1941, but followed the call of duty by entering the armed services before his full term in office had been completed. When he was released from the service recently, he carried the rank of Lt. Colonel.

The NSPE extends to Mr. and Mrs. Beretta its congratulations and very best wishes.

Construction's Progressive Role

By E. P. Palmer

President of Senior and Palmer, New York City. An address delivered before the Thirty-fourth Annual Meeting of the Chamber of Commerce of the United States. Reprinted by Permission.

Progress in a nation depends upon the pioneering spirit of its people. In this Country, we have developed the genius for the transmission of new ideas through research and engineering into new and better products and into new and better services for the people.

When this process is continuous, we have good times, active business, and high employment. When for some reason it is interrupted, we have bad times, stagnant business, and low employment.

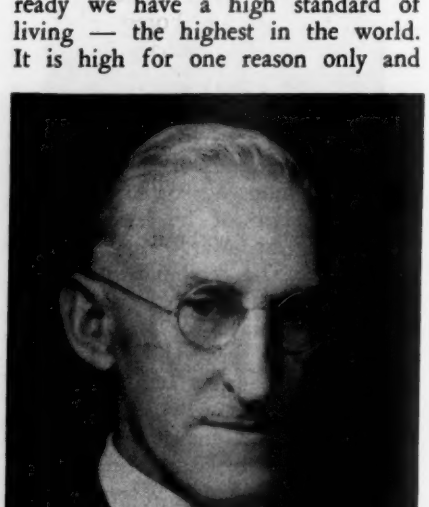
It has been our great good fortune to have political and social institutions which encourage the pioneering spirit. Our history has been written in terms of the conquests of new frontiers, geographical and industrial. It should be our enduring purpose to see that our institutions, regardless of temporary maladjustments, continue to protect and to reward individuals whose inventiveness, industry and courage open up new paths to production and new opportunities for employment. Thomas Edison is, and should remain for every schoolboy, a national symbol of our creative enterprise.

Constant Expansion

Throughout this dynamic wealth-creating process, we are always put to the necessity of constructing new facilities. It may be a pilot plant in which to conduct experiments with a new product or a new process. It may be a research laboratory. It may be a new kind of highway or bridge to improve our transport. It may be a factory to accommodate new methods of mass production. It may be a power plant with its transmission and distribution lines. It may be a residence designed to provide at minimum cost the installation of mechanical equipment deemed essential to a modern home. I have mentioned but a few of the activities in our complex life requiring the services of the Construction Industry.

Whatever the structure is or whatever its purpose, it requires for its building the skills and ingenuity, the materials and craftsmen of the Construction Industry. That is the progressive role of Construction in our society. It provides the facilities which minister to our industrial and commercial progress and to the continuous advancement of our standard of living.

It is commonplace to say that already we have a high standard of living — the highest in the world. It is high for one reason only and that reason is the high per capita productivity of our people.



E. P. Palmer

And why is this so? It is not the length of the workday. Few work long hours any more except the farmer and the men who write directives and especially those who try to interpret them. It is not because of back-breaking toil. Even the farmer has an easy time physically compared with the food producers in other lands.

Productivity the Key

There is only one reason for the productivity of the American workman, and that is the better tools and skills which have been developed, and most important of all, the power to drive those tools.

Man's muscular power is limited to a small fraction of a horsepower. The industrial age has augmented this power until as stated by Mr. Gwilym Price, President of the Westinghouse Corporation, in 1939 every factory worked had between five and six horsepower at his disposal. Note how this has risen. In 1900 it was two horsepower. In 1920, less than three, reaching between five and six in 1939. It is doubtless higher today, but current figures are not available.

The nearest approach in this respect is found in England where in 1939 the average workman had between three and four horsepower at his command. It is interesting for us to note that England at the moment is making a determined effort to better its technology and to increase the power available to its workmen. If we in America are to hold our place, we must continue to improve our technology and to increase our applied horsepower.

If we are to add one more horsepower for every factory workman, it means the construction of two billion dollars' worth of power houses and transmission lines. To this must be added the buildings to accommodate the larger units of production with their modern conveniences, such as air conditioning, perhaps doubling the two billions mentioned.

All this means construction and demonstrates again the progressive role of our industry in accomplishing the universal purpose of constantly increasing the standard of living of everyone in the nation.

Water Supply Important

Water supply engineers have long contended that the use of water provides an infallible measuring device

of the welfare of a people. They cite the low standard of living in Indian cities and their meagre use of water; how little is not recorded, but those who have been there tell me that there is evidence that it is very limited. Compare this with the use in a modern American city — 100 or more gallons per capita per day.

Accepting the theme of the water supply engineers, it is clear that increasing available water for Americans by 20 per cent or even 10 per cent means a tremendous volume of Construction.

Industry Faces New Problems

The Industry's past achievements and the abundant evidence which they provide of its progressive character is no reason, however, for complacency. On the contrary, the Industry today faces new problems which will put to a severe test its capacity to carry on its activities as heretofore with a minimum of government regulation and a maximum of private initiative and private risk-taking.

The reasons for this may be stated briefly. There is a widespread demand for finding a way which will introduce more stability into Construction activity than it has had in the past. The record proves how irregular that activity has been. From a plateau of ten billions per year in the late '20's, we descended into a valley of three billions in the early '30's. Then began our gradual rise which brought us to eight billions before the War. From a high of fourteen billions in '42, we have descended to less than five billions in '45. No one appreciates more than Construction men the desirability of eliminating this saw-tooth pattern. The proposals presently made for effecting that improvement vary all the way from the extreme of converting the Construction Industry into a government-regulated utility, to the more moderate proposal for advancing public works when privately-financed work lessens.

Dangerous Slogans

Regardless of the practicability of particular proposals, there can be no doubt about the appeal which their objective makes. The high level of employment so much desired can only be reached if Construction bears its share. But we must be alert that so-called "full employment" not be made a slogan for a popular movement which may destroy our liberties.

On the other hand, given the right leadership and given the acceptance of its limitations as well as its possibilities in a free society, then the aspiration of useful employment for all who want to work can serve the public interest.

Construction men, however, have repeatedly advised the makers of national policies that a frontal attack, so far as their Industry is concerned, will not bring the desired result. The Industry alone cannot bring about a greater degree of regularity in its activities. It serves the buyers of Construction, individuals, private corporations, and public agencies. Its activities, therefore, are part and parcel of the activities of the Nation's entire economy. Construction men have testified repeatedly that more subtle measures than frontal attack should be sought. They have suggested some revisions in tax policies, such as accelerated depreciation for the creation of job-giving facilities in a period when privately financed construction should be encouraged.

It would be helpful if the recently enlarged Construction Division of the Department of Commerce should initiate studies to reveal the relationship and the interdependence of an expanding economy and a healthy Construction Industry. We of the Industry want to contribute to such a study, and we have available a medium toward that end in the Construction Industry Advisory Council, recently set up by this Chamber. It is a representative forum, designed to ascertain and to crystallize Industry thinking. It includes in its membership men identified with all branches of the Industry; from the Forest and the Mine, to those who manage completed facilities.

We may hope that this group will take the leadership, feeling that we may expect in increasing numbers from both official and unofficial sources, suggestions based upon their analyses of our difficulties without much benefit of Industry judgment and experience.

Problems of Stability

There are three matters bearing on the problem of stability and upon our opportunities to continue to serve the Nation as we have in the past to which I want to make special reference. The first is of pressing current interest, namely, the restriction order affecting building construction, recently issued by the Government. It is not necessary to describe that measure to this audience, nor the motive behind its adoption, nor the chance of its accomplishing the avowed purpose. However, it is apparent to all of us that it can have serious effect upon our entire economy unless administered with great wisdom and with a full realization of the time factor in initiating construction work as well as the relations of Construction to the maintenance of existing facilities and to expanding production of useful goods.

The other two matters affecting our future are of long-range interest. They are the need of creating better research facilities for the Industry and the proposal for the use of public works to sustain the Construction Industry. They will be discussed in that order.

In common with all industry, an important factor for maintaining an active market for the services of our Industry, is the progressive reduction of costs. Much has been done and is being done in this direction by the manufacturers of construction materials and all mechanical equipment used in construction operations. For example, equipment used in dirt moving has advanced tremendously between the Wars. You may have heard the opinion of an Army Officer who served in the Pacific, when he stated: "You can do anything with a Bulldozer, except shave."

Better Coordination Needed

It is a fact, however, that with a few exceptions, the research development of different units has proceeded independently of each other. It is believed that there is an opportunity for better co-ordination of thought and exchange of ideas. We should have an effective means of keeping all in the Industry informed as to the advance in the Art. It is to be hoped that the Research Committee, recently organized by the Construction Industry Advisory Council will develop some practical suggestions in this direction.

The other matter of long-range interest is the proposal for timing public works' construction to sustain activity in the Industry. So far as this speaker knows, the first to suggest this policy was Herbert Hoover, when he was Secretary of Commerce. However, the idea is being advanced by present National policy-makers, and therefore seems to have survived the handicap of its nativity.

Industry representatives have testified before suitable Congressional Committees that joint conference of Federal, State, and Municipal agencies buying construction will be more ef-

fective than mandatory action by some Federal agency. It has been pointed out that the urgency for public works is a relative rather than an absolute matter, and local agencies know their particular problem infinitely better than could a bureaucrat in Washington. For example, the augmenting of the water supply in New York City by obtaining water from the Delaware River has been a 16 year project, and would have required 13 years even in peace times. Interruption in any step of such a program means postponement of the availability to the citizens of great improvements.

This speaker and many others have testified in support of the intelligent use of public works to even out the construction curve, and have emphasized that the Industry be viewed as a means and not an end. There are so many public works which would serve the people that the need is for advanced planning so that they may be put into the construction stage at the proper time.

While not depreciating the importance of the matters just discussed, they are secondary compared with the fundamental concept of our Industry and its relation to the whole economy.

Reference has been made to the function of mechanical horsepower and water supply while in the process of reaching a higher productivity for the workmen and a higher degree of well-being for the entire population. Other functions requiring Construction in our complex economy may be cited: Transportation, reclamation, housing, and commercial and industrial building.

Industry's Investment in Jobs

To get the right perspective of our Industry in the National economy, let us examine its relationship to the production industries. In 1939 the investment to make a job for a workman was $6,000. In 1909 it was $2,800. In other words there was an increase of 114 per cent during that 30 year period. The question arises: What has this increasing investment brought in the way of greater productivity? The readiest answer is the increase in wages for the workmen. In 1929 the average yearly earnings per worker were $510, and in 1939, $1,363 — an increase of 167 per cent. Note the relationship of those two percentages. By increasing the investment in the job 114 per cent, wages for the workmen were increased 167

(*Continued on Page* 24)

Detroit's New Backham Building Is Inspected By Members of Wisconsin Society of P.E.

A group of professional engineers, all members of the Wisconsin Society of Professional Engineers recently visited the city of Detroit for the purpose of inspecting of the Engineering Society of Detroit's portion of the new Rackham Building. The Wisconsin Society is planning headquarters for its organization and had expressed a desire to inspect the modern quarters occupied by the Detroit Engineers in the Rackham Building. The Rackham building, shown below, houses both the Engineer's Society of Detroit, and the Extension Department of the University of Michigan. It is one of the outstanding buildings of its type.

The engineers in the above photogrpah, reading left to right, are: Front Row: Ernest Szekely, President, Bayley Blower Company, Milwaukee; Edwin W. Seeger, vice president, Cutler-Hammer, Inc., Detroit; Lawrence E. Peterson, Consulting Engineer, Milwaukee and Ervin L. Knebes, asst. City Engineer of Milwaukee. All in front row are members of the Wisconsin Society of Professional Engineers.

Engineers in the back row, reading left to right: Donald E. Trefrey, Lighting Division, The Detroit Edison Co., Detroit; Stephan C. Szabo, Fisher Body Division, Gen. Motors Corp., Detroit; Frank G. Horton, Execuitve Secretary, Engineering Society of Detroit; Edward J. Outley, Lighting Division, The Detroit Edison Company, Detroit, and Ivan N. Cuthbert, of Smith, Hinchman & Grylls, Inc., Detroit. Mr. Szabo is president of the Michigan S.P.E. Messrs. Trefry, Outley and Cuthbert are members both of the Michigan Society of Professional Engineers and of the Engineering Society of Detroit.

Report of the Nominating Committee of the N.S.P.E.

The Nominating Committee hereby respectfully presents its Nominees for officers of the National Society of Professional Engineers for the year of 1947.

For President
RITCHIE LAWRIE, JR.
of Pennsylvania

Ritchie Lawrie, Jr., was born on October 7, 1890, in Edinburgh, Scotland. He received his B. S. Degree in Civil Engineering in 1911 at the Carnegie Institute of Technology. He served in World War I as a First Lieutenant in the Ordinance Corps of the U. S. Army.

Mr. Lawrie has from 1922 to the present time been a partner in the firm of Lawrie & Green of Harrisburg, Pennsylvania, engaging in the engineering and architectural design of structures. Between December 1941 and January 1945 he served also as District Manager of the War Production Board in Harrisburg, Pennsylvania. He is President of the Whittaker-Diehl Company, Harrisburg, Pennsylvania, and a Director of the Central Trust Company and the Harrisburg Gas Company of Harrisburg, Pennsylvania, and of the Brubaker Mfg. Company of Millersburg, Pennsylvania.

He is at present President of the National Society of Professional Engineers, and is Past-President of the Pennsylvania Society of Professional Engineers. He is the Treasurer of the National Society for Crippled Children and President of the Pennsylvania Society for Crippled Children.

Mr. Lawrie is a member of the Harrisburg Rotary Club and in 1933 was District Governor of the 34th District of Rotary International. He is a member of the Harrisburg Chamber of Commerce and a Director of the Pennsylvania State Chamber of Commerce and is also a member of the Harrisburg Country Club.

For Treasurer — LEO H. CLEARY of Washington, D. C.

Leo H. Cleary was born in Waterbury, Connecticut. He received his B. S. Degree in Electrical Engineering in 1916 from the Engineering School of the Catholic University of America.

Mr. Cleary is at the present time Technical Director for the National Electrical Contractors' Association, with offices in Washington, D. C. He has been intimately connected with the design and layout of numerous electrical lighting and power projects in Washington and elsewhere for both the government and private organizations. This work has progressed continually from 1916 to the present time. In his early experience he was employed by various engineering companies including a three-year period as Assistant Electrical Engineer with the U. S. Navy Department, from which he resigned in 1922 to obtain practical experience in the electrical contracting field. He then supervised the work of scores of electrical installations of many types in many parts of the country. This led to the design and responsible charge of electrical work in the office of George A. Weschler, Consulting Engineer, Washington, D. C., and in 1939 the organization of the firm of Weschler & Cleary, and later the development of his own consulting engineering organization. As a Consulting Engineer he has received considerable recognition and in June of 1943 was awarded the Army and Navy "E" Award for work on the U. S. Signal Corps School Project at Arlington, Virginia.

He is Treasurer of the National Society of Professional Engineers, a position that he has held very ably for the past four years, and he was Vice-President of the National Society of Professional Engineers in 1940. He has served two terms as National Director of N.S.P.E. from the District of Columbia Society of Professional Engineers previous to which he was both Secretary and President of that Society. He is a Fellow of the American Institute of Electrical Engineers, member of the Society of American Military Engineers, member of the District of Columbia Council of Engineering and Architectural Societies, member of the Washington (DC) Society of Engineers, member of the Washington (DC) Building Congress, and has been on numerous committees and boards devoted to the development of the engineering profession.

He is registered as a professional engineer in the states of Connecticut, Pennsylvania, Maryland, Delaware, and Ohio.

For Vice-President, Northeastern Area — JAMES F. FAIRMAN of New York.

James F. Fairman was born on April 8, 1896, at Big Rapids, Michigan. He received his B. S. Degree in Electrical Engineering in 1918 and his M. S. Degree in 1921, both from the University of Michigan. After obtaining a short experience with Westinghouse Electric & Manufacturing Company he returned to the University of Michigan where he taught for a period of six years and became Assistant Professor of Electrical Engineering.

Mr. Fairman is at the present time Vice-President, Consolidated Edison Company of New York, Inc., in charge of production and operation. His association with this Company was preceded by several stages of engineering work with the Brooklyn Edison Company, Inc., where from Engineering Assistant in 1925 he rose to the position of Electrical Engineer with that Company in 1932 and later became Electrical Engineer with the Consolidated Edison Company of New York, Inc., in 1937.

He is Vice-President and Fellow of the American Institute of Electrical Engineers and at one time he represented the A.I.E.E. on the Engineers' Council for Professional Development.

He is a Past-President of the New York State Society of Professional Engineers.

He is a member of Sigma Xi, Tau Beta Pi, Engineers' Club of New York and the Brooklyn Engineers Club, and is the author of several papers which were published in the American Engineer and a recent paper entitled "Organization of the Engineering Profession" which was published in Electrical Engineering.

Mr. Fairman has been Vice-President of NSPE for the Northeastern area during 1946.

For Vice-President, Central Area — ALEX VAN PRAAG, JR., of Illinois.

Alex Van Praag, Jr. was born on January 29, 1896 at Little Falls, Minnesota. He received his B. S. Degree in Civil Engineering in 1917 from the University of Illinois. He also attended the James Millikin University at Decatur, Illinois and High School at Decatur, Illinois. He served as a First Lieutenant in the U. S. Army in World War I. In 1919 he was Assistant in the office of City Engineer at Decatur, Illinois and in 1920 he was Assistant State Sanitary Engineer of the State of Illinois.

Mr. Van Praag is at present a member of the firm of Warren & Van Praag, Inc., Consulting Engineers, Decatur, Illinois, which association is of 24 years' standing having commenced in 1922. They are consulting engineers for numerous cities and villages in the state of Illinois and in adjoining states, specializing in the design and supervision of construction of municipal public works projects, particularly water supply, sewerage, and light and power plant projects. At various times he has been Special Assistant to the War Production Board, Architect-Engineer for the U. S. War Department in responsible charge of water supply and sewerage facilities of Sangamon Ordnance Plant, and Architect-Engineer for U. S. War Department in responsible charge of engineering construction of Freeman Army Airfield at Seymour, Indiana.

He was a Director of the National Society of Professional Engineers from the state of Illinois during the years 1942, 1943, 1944 and 1945. He has been Vice-President of NSPE, for the Central area, during the year 1946. He is a member of the American Society of Civil Engineers, a member of the Illinois Society of Professional Engineers and its President in 1942, a member of the American Water Works Association, and a member of the Central States Sewage Works Association.

He is a member and Past-President of the Decatur, Illinois Lions Club, a member and Past Exalted Ruler of the Decatur Elks Club, member of the Decatur Association of Commerce, and a member of the Decatur Club.

He is registered as a professional engineer in the states of Illinois, Iowa, and Indiana. He is also the author of numerous articles on water supply, sewerage, and light and power for various technical publications.

He has contributed letters regularly to the American Engineer.

For Vice-President, Western Area— WILLIAM L. THRAILKILL of Washington (State).

William Lubrecht Thrailkill was born on June 23, 1902, at Hamilton, Montana. He received his B. S. Degree in Electrical Engineering with high honors at the University of Washington in 1927. After graduating he was an instructor in engineering in the University of Washington during the year 1927.

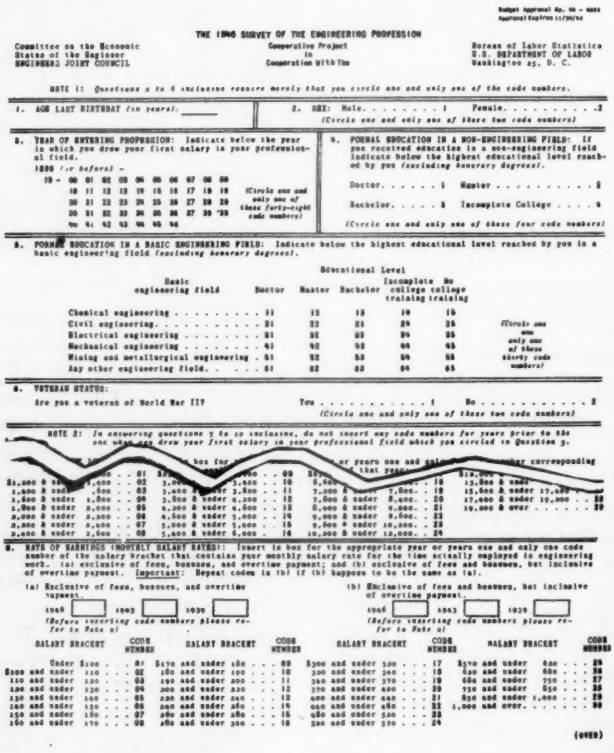
Mr. Thrailkill is at present the Assistant General Manager and Director of The Washington Water Power Company at Spokane, Washington. His association with this organization commenced in 1933 when he became its Rate Engineer and later was promoted to manager of its Consulting and Research Department. His earlier experience includes work as an Assistant Engineer and Assistant Chief Engineer of the Washington Department of Public Works.

He has served the National Society of Professional Engineers as Vice-President from the Western Area for the past two years. He is a member of the American Institute of Electrical Engineers, a member of the Associated Engineers of Spokane, a member of Spokane Chamber of Commerce, a member of the National Office Management Association, and a member of the Washington State Reclamation Association.

He is a member of Sigma Xi, Tau Beta Pi, Spokane City Club, Spokane University Club, Spokane Country Club, and is also a member of the Lions Club.

For Vice-President, Southern Area, ALAN GRIFFITH STANFORD, of Georgia.

Mr. Stanford was born June 12, 1894, Charleston, South Carolina. At-



THE 1946 SURVEY OF THE ENGINEERING PROFESSION

Committee on the Economic Status of the Engineer
ENGINEERS JOINT COUNCIL

Cooperative Project
Cooperation with the

Bureau of Labor Statistics
U.S. DEPARTMENT OF LABOR
Washington 25, D. C.

NOTE 1: Questions 1 to 8 inclusive require merely that you circle one and only one of the code numbers.

1. AGE LAST BIRTHDAY (in years): _____

2. SEX: Male . . . . . 1 Female 2
(Circle one and only one of these two code numbers)

3. YEAR OF ENTERING PROFESSION: Indicate below the year in which you drew your first salary in your professional field.
1899 (or before) - 00
19 - 00 01 02 03 04 05 06 07 08 09
10 11 12 13 14 15 16 17 18 19
20 21 22 23 24 25 26 27 28 29
30 31 32 33 34 35 36 37 38 39
40 41 42 43 44 45 46
(Circle one and only one of these forty-eight code numbers)

4. FORMAL EDUCATION IN A NON-ENGINEERING FIELD: If you received education in a non-engineering field indicate below the highest educational level reached by you (excluding honorary degrees).
Doctor. . . . . 1 Master 2
Bachelor. . . . . 3 Incomplete College 4
(Circle one and only one of these four code numbers)

5. FORMAL EDUCATION IN A BASIC ENGINEERING FIELD: Indicate below the highest educational level reached by you in a basic engineering field (excluding honorary degrees).

Basic engineering field	Educational Level: Doctor	Master	Bachelor	Incomplete college training	No college training	
Chemical engineering	01	02	03	04	05	(Circle one
Civil engineering	06	07	08	09	10	one
Electrical engineering	11	12	13	14	15	only one
Mechanical engineering	16	17	18	19	20	of these
Mining and metallurgical engineering	21	22	23	24	25	thirty code
Any other engineering field	26	27	28	29	30	numbers)

6. VETERAN STATUS:
Are you a veteran of World War II? Yes . . . . . 1 No 2
(Circle one and only one of these two code numbers)

NOTE 2: In answering questions 7 to 10 inclusive, do not insert any code numbers for years prior to the one when you drew your first salary in your professional field which you circled in Question 3.

7. [illegible] box for [illegible] or years one and only one code number corresponding to that year.

$1,200 & under $1,400	01	$3,200 & under $3,400	09	$5,200 & under $5,400	17	$7,200 & under $7,600	25	$10,000 & under $12,000	33
1,400 & under 1,600	02	3,400 & under 3,600	10	5,400 & under 5,600	18	7,600 & under 8,000	26	12,000 & under 14,000	34
1,600 & under 1,800	03	3,600 & under 3,800	11	5,600 & under 5,800	19	8,000 & under 8,400	27	14,000 & under 16,000	35
1,800 & under 2,000	04	3,800 & under 4,000	12	5,800 & under 6,000	20	8,400 & under 8,800	28	16,000 & under 18,000	36
2,000 & under 2,200	05	4,000 & under 4,200	13	6,000 & under 6,400	21	8,800 & under 9,200	29	18,000 & under 20,000	37
2,200 & under 2,400	06	4,200 & under 4,400	14	6,400 & under 6,800	22	9,200 & under 9,600	30	20,000 & over	38
2,400 & under 2,600	07	4,400 & under 4,600	15	6,800 & under 7,200	23	9,600 & under 10,000	31		
2,600 & under 2,800	08	4,600 & under 4,800	16	7,200 & under 7,600	24	10,000 & under 12,000	32		

8. RATE OF EARNINGS (MONTHLY SALARY RATES): Insert in box for the appropriate year or years one and only one code number of the salary bracket that contains your monthly salary rate for the time actually employed in engineering work: (a) exclusive of fees, bonuses, and overtime payment; and (b) exclusive of fees and bonuses, but inclusive of overtime payment. Important: Repeat codes in (b) if (b) happens to be the same as (a).

(a) Exclusive of fees, bonuses, and overtime payment.
1946 [ ] 1943 [ ] 1939 [ ]
(Before inserting code numbers please refer to Note a)

(b) Exclusive of fees and bonuses, but inclusive of overtime payment.
1946 [ ] 1943 [ ] 1939 [ ]
(Before inserting code numbers please refer to Note a)

SALARY BRACKET	CODE NUMBER	SALARY BRACKET	CODE NUMBER	SALARY BRACKET	CODE NUMBER	SALARY BRACKET	CODE NUMBER
Under $100	01	$170 and under 180	09	$300 and under 320	17	$570 and under 600	25
$100 and under 110	02	180 and under 190	10	320 and under 340	18	600 and under 650	26
110 and under 120	03	190 and under 200	11	340 and under 370	19	650 and under 750	27
120 and under 130	04	200 and under 220	12	370 and under 400	20	750 and under 850	28
130 and under 140	05	220 and under 240	13	400 and under 440	21	850 and under 1,000	29
140 and under 150	06	240 and under 260	14	440 and under 480	22	1,000 and over	30
150 and under 160	07	260 and under 280	15	480 and under 520	23		
160 and under 170	08	280 and under 300	16	520 and under 570	24		

(over)

Every member of NSPE has received one of the above questionnaires. Won't you check up and make sure that your copy has been filled out and returned. This is important. The deadline is early in November.

tended Grammar and High Schools in Charleston and was graduated from Clemson College, South Carolina in 1914 with a B. S. Degree in Electrical-Mechanical Engineering. For one year following graduation, served as Electrical Laboratory Assistant at Clemson College, during which time graduate study work in alternating current phenomenon was carried on under Prof. Sam R. Rhodes.

During World War I, served in the U. S. Army Motor Mechanic Branch, Aviation Section, Signal Corps, which service included one year in France. During the last six months in France, following Armistice, conducted night classes in Elementary Electrical Engineering, Geometry and Physics for several months, and later served as instructor in Electrical Engineering Laboratory at the A.E.F. University at Beaune, France.

Starting in December, 1919, as a Junior Electrical Engineer with Robert and Company, Inc., Architects and Engineers, Atlanta, Georgia, was later advanced to Senior Electrical Engineer and in 1923 was made Manager of the Electrical Engineering Department.

In 1940, direct supervision of the Electrical Engineering Department was relinquished so that more time could be devoted to special assignments, including the better part of a year at Corpus Christi, Texas, in charge of Electrical Design and Personnel in the company's branch office.

From early 1942 until the middle of 1944, served as Project General Manager on the Marietta Aircraft Assembly Plant of the company's office, established for handling the construction of this plant for the Army Air Force under the direction of the U. S. Corps of Engineers.

In March, 1945, was promoted to Vice President of Robert and Company, Inc., engaging in Administrativee work and special assignments. During the nearly twenty-seven years of continuous connection with Robert and Company, Inc., has been associated in varying degrees with a large portion of the nearly one billion dollars of engineering design and construction work, handled by the company in its peace and wartime efforts.

A member of the American Institute of Electrical Engineers and has served as Chairman of the Georgia Chapter. Membership also maintained in the Georgia Engineering Society, Society for Advancement of Management and Atlanta Personnel Club. A charter member of the Georgia Society of Professional Engineers and served as its first President in 1944 and at present a member of the Board of Direction. A member of the State Board of Registration for Professional Engineers and Land Surveyors since the enactment of the law governing the practice of Professional Engineering and Land Surveying in 1937.

Attention is called to Article VII Section 3 of NSPE Constitution which permits nominations other than those by the Nominating Committee.

Each Nominee's name has been sent to the Member State Society for ratification and each State Society has ratified the submission of the Nominee's name.

Each Nominee has been requested to accept the nomination and each has accepted in writing.

This report has the unanimous approval of all of the Committee members.

NOMINATING COMMITTEE
Walter L. Simpson, Chairman
John F. Hale
Charles S. Larkey
Lelard R. Post
Hugh C. Clarke

"We are confronted with the paradox wherein the prestige of engineering is extremely high and the prestige of the engineer (in any field other than that of his profession) is relatively low . . . The engineer is rated low because, unlike his handiwork, he has not stood out over and above his environment."—From a report prepared by a group of engineers.

Too many people think that "freedom of the press" means the right to monopolize the news; the right to broadcast distortions of fact to support particular interests; and to suppress important news, if need be, to avoid injuring the interests or the feelings of some privileged interest or person.

Dr. F. R. Moulton, permanent secretary of the American Association for the Advancement of Science is quoted as saying: "We must now adopt a peace-time (rather than war-time) view in which progress in social science can go along, and if possible, keep pace with developments in the physical sciences."

What Sherman said about war, goes for the peace so far.

To Register or Not To Register—Chemical Engineers Register Opinions

The Legislative Committee of the American Institute of Chemical Engineers has conducted a postcard ballot soliciting answers to four questions dealing with the State registration of Chemical Engineers. The questions were:

1. Are you licensed?
2. Do you favor licensing?
3. Do you favor "Engineer-in-Training"?
4. Do you intend to license in the near future?

Replies were received from 3,254 persons, representing approximately 56 per cent of the total membership as of the time the ballots were mailed.

Of the total membership voting, the following percentages are already licensed (Question 1): Active 35.0; Associate 30.5; Junior 9.8.

If the above figures are combined with those who intend to license in the near future (Question 4) we have an indication in the following percentages of the situation as it should shortly exist: Active 49.5; Associate 52.0 and Junior 45.8.

It was noted that in such states as New York, where the law has been in force for some time, the percentage of actives already licensed is fairly high and that more than 50 per cent of both actives and juniors may be expected to be licensed in the near future. The highest percentages are found in Ohio, Maryland and Texas.

In such states as Delaware, New Jersey and West Virginia, the general sentiment is against licensing, but the juniors in all three states are strongly for it.

As a whole, the vote on Questions 2 and 3 are as follows (eliminating undecided):

	Percent Active	*Percent Junior*
In favor of licensing	56.5	69.8
In favor of engineering in training	68.5	75.3

The $75,000 Washington building of the National Farmers' Union is being sold, it is said, because the directors of the union have lost confidence both in President Truman and in the National Congress to pass any legislation worth while. The union claims a membership of 400,000 in 32 states.

Technological Responsibilities In The Atom Age

As Seen By Some of America's Scientists, Statesmen and Educators

August 6th, 1946 marked the first anniversary of the atomic bombing of Hiroshima, in Japan. Atomic scientists generally consider it imperative at this time, that the American people come to a deep appreciation of what this historic development may mean for good or ill to the future of the American Way of Life, and even to the future of all civilization. The danger is sensed that the mere repetition of the story of the wonders, and even of the terrors implicit in atomic energy, may cause people to take it all as a matter of course. Public apathy on the subject, these scientists feel, could result in tragic consequences for America and the world.

In an attempt to bring the seriousness of the problem sharply to the attention of the American public, the National Committee on Atomic Information has asked a number of leading scientists, statesmen and educators to give a brief indication of what they think are the implications of atomic energy for the future of civilization. This committee is sponsored by the American Federation of Scientists.

Of Special Interest to Engineers

These scientists feel that all professional engineers especially will want to inform themselves of the social responsibilities which all technologists must share for the consequences of any mishandling of atomic energy by short sighted political interests. The danger to human life and to the very structure of civilization itself in the immediate future is great enough to shatter the complacency of even the socially disinterested.

In the hope of contributing to the broader point of view, the following excerpts from the files of the National Committee on Atomic Information is reproduced for the readers of the American Engineer:

By R. F. Baker, Physics Department, Cornell University

"In the year since the first use of an atomic bomb as a military weapon, progress has been made in understanding how atomic energy can be utilized for peaceful purposes and at the same time be excluded as a weapon. During this time, however, complacency about the atomic bomb had steadily increased. This complacency among our people has recently been encouraged by the anticlimatic but not unanticipated results of the Bikini test. The devastating effects of a single atomic bomb on a city are no less today, indeed they would probably be greater, than they were at Hiroshima. Tens and hundreds of these bombs may be used in a future war. Atomic weapons cannot simply be outlawed by treaty, but, as the discussions in the United Nations Atomic Energy Commission have shown, there must be an effective international authority to achieve this desired result. Let us work toward this end and hope that its establishment may be the first step in banishing war itself."

By Jerome S. Bruner, Lecturer on Social Psychology, Harvard University

Since the dropping of the first atomic bomb we have learned not only that the dangers which face mankind have greatly increased, but also the opportunities for progress and expansion. Whether we move in the direction of disaster or toward a brave new world of opportunity depends, as have all great historical choices, upon Everyman. We have had a revolution in the physical sciences, but we have not had a corresponding revolution in the minds of men. Unless that second revolution, the psychological revolution, is quick in coming we shall be doomed. Its key is understanding — understanding not only of the potentialities of atomic energy, which is essential, but also understanding of the potentialities of modern man as a creative, cooperative being. So long as man persists in misunderstanding and mistrusting his fellow men and so long as nations persist in misunderstanding each other, we shall never be free of the fear that the atomic age has brought upon us a curse far in excess of its blessing.

By Dr. Arthur H. Compton, Chancellor, Washington University, St. Louis, Mo.

Atomic power has served man's needs longer as a tool than as a weapon. Control of atomic power and its by-products assures us of great advances in our future mode of living. The survival of civilization may however depend upon avoiding an atomic war. The atomic bomb makes impossible the prolonged protection of any nation by military means and requires that international agreements be reached which will insure our safety.

By Congresswoman, Helen Gahagan Douglas

The most intricate complexity of which the mind of man is capable — the release of atomic energy — has led to the ultimate simplification of man's philosophy. For a year the world has known the wonderment that the plight of mankind is spelled out in the words, peace or annihilation.

By some miracle, the world has survived an entire year of the atomic age, knowing this fact, and not doing much about it. The time is long over-due to act, lest the alternative to peace overtakes us. The most important single objective of the world must be to reach total agreement on control of atomic energy for total peace.

By Dr. Knight Dunlap, Professor of Psychology, University of California

The psychological and sociological confusion produced by the Bikini experiments have been marked. I have been told by a cross-road correspondent that most of the correspondents were convinced before-hand that the experiments would be failures, and were therefore not in condition to make sound observations. The political results of the tests were likewise not sound, as the reports of Russian writers have indicated. The experiments themselves have been useful in their results, but the political situation in our Congress is, or may be, disastrous.

By Clifton Fadiman

One year of the short reprieve has passed. The human race as we know it, unable to produce leaders who can rise above their childish age-old preoccupation with power, waits, hypnotized, for the great atomic and bacteriological death to strike it. It will strike soon. The days, the weeks, the months pass. A world which refuses to become one is already half-resigned to becoming a chaos of bloody horror as the alternative. The bomb ticks. The time-fuse shortens. Our last chance is almost gone.

By Reverend John Haynes Holmes, New York City

When science consented to become the bond servant of government and war it made inevitable the supreme calamity and atrocity of the atomic bomb. Now horrified at what it has done it seeks to undo its own handiwork. It may be too late. If not, it will be because man rediscovered those basic values of the spirit which science has so consistently ignored and restores them to their old position of authority. The atomic age must be a religious age or it will destroy us all.

By Harold L. Ickes

The most fitting celebration of the first anniversary of Atomic Age would be for a world wide commitment that no nation would ever use this instrument of death and obliteration in any way whatever might be the provocation. And as earnest of America's intention in that regard we ought to desist forthwith from making any more atomic bombs and make arrangements for rendering harmless or destroying those that we already have.

By William K. Jackson President, Chamber of Commerce of the U.S.

Science in its discovery of how to use atomic energy has developed a force that is at once the most destructive ever known to man and the most hopefully filled with promise of practical value to human welfare. Possession of the knowledge of how to manufacture atomic bombs is a terrifying responsibility but it may also present a very hopeful opportunity. Development of the bomb intensifies the fundamental problem of outlawing war. At the same time, peacetime uses of atomic energy should be explored to the fullest so that mankind may benefit rather than suffer from this marvelous new force.

By Margaret Meade, American Museum of Natural History, New York City

Our best hope of meeting the challenge of the atomic discoveries is to recognize that they introduce a major qualitative change in human history which must be met by major social inventions. These inventions must include organizational progress toward world authority, the elimination of war, great changes in our techniques of economic distribution and methods for the continual evaluation and regulation of social change in the interest of the lives of men and the life of the world. The greatest danger is that we may cling fatallistically to obsolete ideas seeing the bomb as just another weapon and the steps toward world organization as just more power politics based on "inevitable" conflict between pre-atomic economies.

By Dr. Pitman B. Potter, The American University, Washington, D. C.

The way in which the politicians and the peoples have frittered away a year without any adequate action for atomic control, national or international, is deeply discouraging and also terrifying. If the extreme utterances of the scientist and the biased attitude of the militarists cannot provoke public action considerations of sheer self-preservation should.

By Professor Glenn T. Seaborg, Dept. of Chemistry, University of California

The realization of nuclear energy in the form of the atomic bomb a year ago has given rise to international political and social problems of unprecedented magnitude and importance. The first step toward their solution lies in bringing before the people the facts about nuclear energy and its implications and great progress in doing this has been made during this first year. A second great help has been made in the State Department's Acheson Report on the International Control of Atomic Energy and its favorable reception. This year has also seen the beginning of actual plans for the development of nuclear energy for application to industrial uses, and it is expected that research in this field will get a good start in the second year of the atomic age.

By Raymond Swing, Radio Commentator

The first year of the atomic age has been far too brief for this country and the rest of the world to grasp the realities of the new era. But great strides have been made. The McMahon Bill passed the Senate. The Acheson-Lilienthal report has become official American policy. Thus we are on the way to civilian control of atomic energy in this country, and international control of it by a world authority. At best we have only a few years in which to make sure that war itself has been effectively abolished, as it can be only by limitation of national sovereignty and the establishment of a world of law. Great as the strides are that already have been made, the pace must quicken if the goal is to be achieved.

By Dr. E. P. Wigner, Department of Physics, Princeton University

Most alarming feature of first year after birth of the atomic bomb is slow rate at which international negotiations progressed. One fears that rate at which eventual agreements will be implemented will not be faster and agree-

(*Continued on Page* 24)

National Issues — Washington Economic and Political Front

Everywhere we look nowadays, we find people are more than ever questioning the integrity of politicians and the efficiency of political methods, even of governments themselves.

To counter this recently accelerating trend, the voters are being fed a propaganda diet of "pious phrases," a sort of "Blood Sweat and Tears" philosophy which implies that the world is in a very bad way, and that the people just do not have the courage, or perhaps not even the intelligence to do much about it.

In substance, the foregoing is about what Dr. Frederick Nolde told the World Council of Churches at a recent conference in England. Dr. Nolde is Dean of a theological seminary in Philadelphia.

Speaking before the same gathering, John Foster Dulles, alternate U. S. delegate to the U. N. Assembly, commented on the mounting tension between labor and management, and he particularly referred to the largely ideological conflict between Russia and the Western Powers. "The only thing about this situation that is new," he said, "is that for many years the reasons for these clashes were closely covered up from the public view; they were generally kept out of the news. Now they are getting a full airing." Mr. Dulles would have been more accurate in this statement, had he qualified it by saying that only *some* of the issues are being aired publicly. For the truth is, more of the unpleasant economic and political facts of life are being kept from the people even now, that are being revealed. This applies especially to those reasons *why* these clashes exist, and what basically is behind them all.

No one can disagree with the further statement of Dr. Nolde that, "Effective work in the political and economic field demands far more than 'pious phrases,' more than the mouthing of vacuous platitudes and half truths about everybody's good intentions."

Nimitz Minces No Words

In sharp contrast to the general line of banalities, Admiral Nimitz, chief of naval operations, talked "turkey" to a group of teen-aged students meeting in Washington the other day. He stated that "the youth of the present generation must be better than their predecessors," if we are to meet the "proper problems" of the future. The Admiral made it clear that he considers the problems of peace to be more difficult of solution than the problems of war. And just as we were about to wonder just *why* the achieving of peace should be harder than the winning of war, he added: "Yours will be the hard job, because *the number of people willing to work for their country is far fewer than that of those who are willing to die for it.*" Not a "pious phrase" in his entire talk, nothing about our people and our ways being better than those of the rest of the world unless it be his suggestion that as a nation and as a people we would be wise to "consider the mote in thine own eye," before condemning others for the beam we discover in their behavior.

Prices and O.P.A.

Apparently the Communists aren't the only group that can "switch the party line," almost overnight. You can see the same characteristics manifest in current propaganda about what the lifting of controls will do to price levels. The same interests which, a few weeks ago were assuring the people that the "law of supply and demand would keep prices in line," have changed their story. Now the approved line is something like this: "We cannot expect increased production to hold prices down generally, for the reason that production is already breaking records and in many fields the total volume of this production cannot be substantially increased."

The current upsurge in prices has brought out a new element in the economic picture which everybody admits destroys much of the validity of the supposed "law" of supply and demand. The economists have a phrase for it, (and they are by no means awkward at coining their own "pious phrases") when they tell us that supply and demand hasn't much to do with price levels in the *"administered industries."* That's an innocuous sounding way of saying that, with reference to most of the commodities on the market, price levels are *controlled* by means other than supply and demand. The significant thing about this is, not that it represents anything *new* but rather that such facts are now being brought to the attention of great numbers of people as never before. Also the fact is worth noting that "nice" explanations are thought necessary in order not to create an "unfavorable climate of public opinion." (Make no mistake about it, these "public relations experts," who think up these phrases, get good money.)

Pocket Book Thinking

The removal of price restrictions has given us new illustrations of the extent to which folks "think with their pocketbooks." For instance in Washington, a group of wives of democratic Congressmen, and another group of wives of republican Congressmen, each set out to make a survey of price increases resulting from government price controls going off. The percentages of increase found by the ladies of the democratic group, were from two to five times higher than were observed by the republican ladies. As one reporter commented on this incident, "Some time, in some way, the people of this democracy have to learn how to get their facts right, or we're going to bog down."

The Chinese Bot Boils

American opinion is, as usual, sharply divided on the question whether our marines should be helping the Chinese War Lords fight their battles with the reformers in the North of China. The division of opinion hinges, again as usual on how much we hate or fear communism. The argument in favor of this particular interference in the internal affairs of a foreign nation seems based on the belief that if American troops move out, China will go communistic. It is very much the same reason, given by the same elements of our population, as to why we should *not* interfere with Spain's internal difficulties. The question naturally arises, "For how long and how often must American troops patrol the soil of foreign na-

tions for the purpose of preventing the growth of communism?"

As in the case of so many complex problems, the ultimate solution in the case of China, may be "determined by events, and not by men." Mme. Sun Yat-sen, widow of China's revered leader, insists that our continued military aid to the "fascist elements" in China, will do more than anything else possibly could, to drive the Chinese people to communism. This point of view is often countered by the statement, "What the people think or want in China (as elsewhere) has very little to do with settling the case."

The Peace Conference

At the moment the Paris Peace Conference is in session. On-the-ground reports of what is going on appear to vary, according to the preconceived notions of those who tell the story, which doesn't give a thoughtful person much confidence in the "news" as we get it. One American radio commentator reports from Paris that the delegates are engaged "chiefly in choosing up sides for the next war." Of course, that aspect is not exactly news, for practically the same statement was made with reference to the San Francisco Conference, more than a year ago, by a number of solid reporters, including the publisher of one of Washington's leading newspapers.

The issue of "little nation participation," is one of the most troublesome. Russia continues to demand her right of a veto, in one way or another. Apparently this "choosing up sides," hasn't been going too well for the only communistic state on earth.

Just before Congress adjourned, it retained its own "veto" power over the right of the World Court to determine what is a "domestic" issue, and what is not. As one Congressman put it, "They might say that a question involving the Panama Canal was not a domestic issue." The Congressman was correct in his assumption. Russia considers the Panama Canal just as much her business, as the Dardanelles is America's concern. That's why our Congress wants the veto in this case. What too many Americans appear to overlook is that this issue looks different to the people of other lands — lands with whom we are supposed to be trying to establish an enduring peace on a reasonable interpretation of the facts of international relationships.

Congress Investigates Itself

Second only to the Price Control issue, as far as the wide public interest in it is concerned, is the Congressional investigations of war profiteers. In the view of most Washington news men, there is little likelihood that more than a tiny fraction of the total number of these shady deals will ever be made public. Up to this writing, the exposés have dealt with relatively "smaller fry," as far as the war profiteers are concerned. There are, of course, very potent (we almost said "good") reasons in the Congressional mind for not digging deeper and exposing the bigger examples of collusion, which caused a heavy drain on the public treasury.

The "Back Fire" Being Made Ready

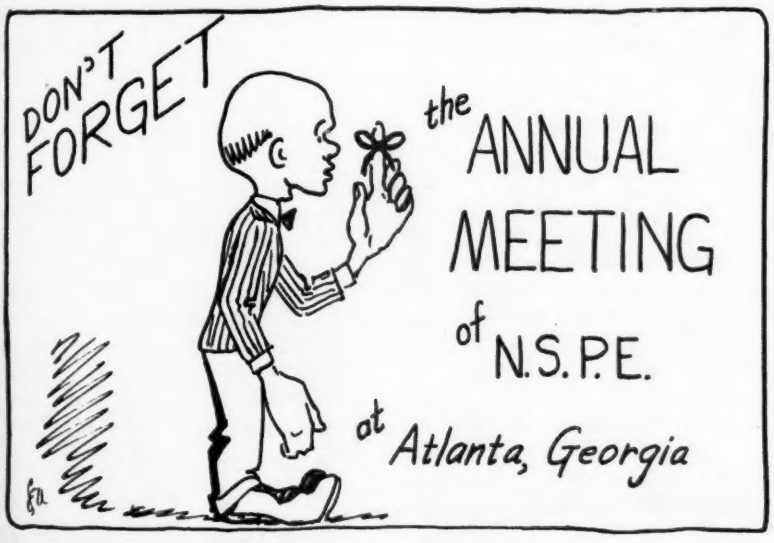
The "hush-hush" boys have plenty of ammunition available, which will be played up in the press for the purpose of preventing any really adequate airing of what has been going on in the way of deliveries of defective supplies, not to mention the utterly unjustifiable projects which were started, with no other apparent purpose than to give a juicy profit to "friends of the brass." Among the arguments heard around Washington as likely to be used in the "Conspiracy of silence" are: "We must not disturb public confidence in the honesty of our public servants, for if we get another depression soon, too many scandals now may make the promotion of World War III tougher than ever; Those big profits were necessary to induce industry to take the financial risks (the government took the risk in every case); We just had to get big volume production quickly regardless of cost in a desperate war situation; These Congressional investigators are only trying to get publicity for themselves as a means of getting bigger political jobs"; and finally, "It's always been that way in government, so why crab and stir up the public over irregularities that are nothing new."

The leading figures in the two political parties are already preparing to put the full responsibility for everything, on the other side. Some will blame Congress, others the Administration. The Comptroller General stirred up a hornet's nest by his recent Senate testimony. He put much of the blame for conditions squarely on the shoulders of the Congress itself, because laws passed at the behest of interested pressure groups, tied the hands of the General Accounting Office, in its attempt to prevent downright robbery of public funds.

The mass of charges and counter charges, along with the inevitable "pious phrases" of those attempting (for their own purposes) to "pour oil on the troubled waters," will (again as usual) leave the public mind in a veritable daze, from which it will too often seek relief in some form of "bread and circuses."

Inflation Unavoidable Now

While we still had some hope of price regulation, there was a wide difference of opinion as to whether inflation, in its more serious aspects, might be avoided. Now that Congress has deflated all effective controls, no informed person can be found who



believes that the price line will be held. The main difference of opinion hinges on how fast and how far the general price level will rise.

Right now the apologists for the current inflation are active. Much of this propaganda is mutually exclusive — self contradictory. The usual effort to play down the issue, even to maintain that inflation is a good thing for the country, may be expected — so say seasoned observers of "public opinion as she is manufactured."

Who or what started the inflationary spiral upward? Was it labor's demand for higher wages, or was that preceded by substantially higher prices for the necessities of life? The arguments pro and con are about as convincing and conclusive as the old one about the hen and the egg.

News comes of 1,500,000 pounds of new potatoes dumped on one deserted Army landing field in Arizona. That is reminiscent of the early days of the unlamented A.A.A. program. Why not ship our surplus foods to Europe's starving peoples? Some say it is not practical to send the "spuds," even in dehydrated form. Others insist we are living in a "scarcity economy," which means that only through keeping down the total available supply of commodities, can profitable price levels be maintained. Try and find the true answer. Some time, some how this question must be answered. It cannot forever be laughed off. When we do get ready to face that issue, *engineers* will be asked to give us the low down — no matter what pressure group gets hurt.

More Investigations

Information comes to us that there is soon to be an investigation of railroad rates charged governmental agencies during the war. Still another investigation is to be aimed at placing responsibility for the alleged dissipation of underground oil reserves belonging to the U. S. Navy.

Some day we may get an investigation designed to uncover the reasons for so much crookedness and inefficiency. A significant fact in this connection is that it is either government or the public which pays and pays. It is to be expected, of course, that any such basic investigation, would meet with a lot of opposition. It would be subject to pressures and sabotage at every turn. If we may judge by what has happened in the past, any such committee most assuredly would be made up largely of men thoroughly experienced in profiteering.

Not long ago, one of Washington's well known opponents of the cartel system, withdrew his request for such an investigation. His withdrawal was because of his fear that Congress would load the committee with men connected with the cartels under scrutiny. The procedure of putting interested parties on investigating committees, is often based on the assumption that "only men close to the problem can do such a job well."

Bad Men Come and Go, But Bad Systems Persist

Seriously speaking, we have a hunch that any sincere investigation of the fundamental causes of such widespread double-dealing might corroborate the truth of a statement made by the late Thomas W. Lawson, an old time Wall Street stock trader of the "muck-raking" era. Speaking of the evils apparently inherent in his kind of business he said about as follows: "You won't get anywhere by trying to punish individuals for what goes on here. Most men put in this environment would behave no better. What the good people must face is the fact that the *system* under which we are forced to operate, causes most of the corruption. Any system such as ours which puts a high premium on deceit and corruption, especially when the handling of other peoples' money is involved, will always attract the wrong kind of operators." The whole experience of mankind in its effort to prevent exploitation, tends to support the correctness of such a view.

One Washington official put it this way: "We may expect little improvement in the efficiency of government, until we devise some method of picking better men to carry the top responsibilities. We must put better men behind the men who, in the name of 'peace, prosperity and justice,' are at present merely 'choosing up sides' for the next world war."

Regardles of anyone's reaction to the foregoing, the whole economic and political scene in Washington cries to high heaven for a good big dose of "the engineering approach." But right now, it begins to look as though the scientists, organized for social action only within the past year, are beating the engineers to the draw.

Can You Help a Struggling European Student of Engineering?

The National Society of Professional Engineers frequently receives requests from engineering students located in various parts of Europe who write of their desperate need for material to enable them to complete their technical educations.

The demand appears to be particularly urgent for used technical and scientific books, illustrated periodicals, drawing and scientific instruments of many kinds, including drawing pencils. All of these items are, of course, extremely scarce and difficult to obtain in the war torn lands.

The distribution of donations of such material is being coordinated through agencies of the leading engineering societies. If you have something you would be willing to contribute to assist these destitute would-be engineers in other lands, give the Washington office a list of the items you have available and we will let you know where they may be sent.

Address your letter in care of Paul H. Robbins, Executive Director, at the Washington office of NSPE.

Dogma denies law as reason and extols it as will—the will of the ruler.

Some people apparently consider wars as an Act of God in one of His bad moods.

Letters From Readers

Editor, American Engineer:

"Don't Knock If You Can't Boost."

The article in your paper, May issue, entitled: "Objective—Social and Economic Advancement of Engineers," is very good.—Boost.

The article "Ethics of the Engineering Profession", is not so good. After an extensive definition of the meaning of the word "Ethics," it would appear as though it resolved ethics down to whether a Professional Engineer is able to differentiate between right and wrong, honesty and dishonesty.

When a man becomes a Professional Engineer, if he has not acquired this ability—or if it wasn't born in him, there is no hope for him.—This is a knock.

Walter Dalton,
Philadelphia, Penna.

EDITORIALS

Don't Let This Happen to You

Recently a member of the N. Y. State Society of Professional Engineers, (who for obvious reasons, prefers to remain anonymous) in the New York Metropolitan area received a call from one "Walter B. Buckner, representing himself as a licensed professional engineer and land surveyor. Mr. Buckner said he was down on his luck but that he had a job a short distance upstate on which he could make some money, "if I only had a transit."

On the strength of either forged or stolen credentials, which apparently were in good order, the member of the New York Society, rented "Mr. Buckner," a transit for one week at a nominal figure.

Two weeks passed without hearing from Mr. Buckner. A few days later the police, who were notified, found the transit in a pawnshop, it having been left under the name of "N. L. McLeod." Of course our member had to pay a sizable sum to recover his instrument.

Neither the N. Y. State Society, or the Headquarters office in Washington has been able to locate in their files, either the name Walker B. Buckner or that of N. L. McLeod.

These are the facts as they come to us. In view of this happening, other engineers may want to do some double checking before making substantial loans of equipment or anything else to strangers who may be carrying false identification.

Cause and Effect In Labor Relations

One of our good friends sends us a copy of an editorial appearing in a recent issue of Medical Economics, relative to the efforts of the United Public Workers of America to organize hospital nurses. The editorial concludes, "It would be unfortunate for both the (medical) profession and the public if our hospitals were to come under the thumb of a union whose leaders use the membership as counters in a dubious political game."

All professional engineers can very well understand how the average member of the medical profession may feel about developments of this nature, striking as they do, so close to the personal and confidential relationship that exists between the physician and his patient. The public also might feel deeply concerned over the threat of a strike of hospital nurses, in an organized attempt to raise wages, or improve working conditions.

The Other Side

It does seem, however, that the professional mind — both engineering and medical — ought to know that there are usually two sides to such questions. With their scientific training it seems a little strange that so many of them fail to look at *causes* of radical unionism, if not of the whole phenomenon of radicalism itself. Bewailing the effects, while being indifferent, or at least inactive, in relation to the obvious causes, is not what we have a right to expect of men who lay some claim to being men of science, not to say, of high ethical standards.

Some nurses have been paid well. But for the most part and for many years, the average hospital nurse worked from 16 to 18 hours a day in many hospitals, at rates of pay describable only as "disgraceful."

Students of social science, those that make any pretense of being free from dogmatic ideologies, are pretty much in agreement that the often misused word "exploitation" is at the root of most of the so-called "undesirable unionism." Eliminate substandard wages and working conditions, and the "racketeering" unions won't have much chance. Registered nurses, like school teachers, consider themselves as professional people. Yet in both groups, utterly inadequate pay, plus the often political or otherwise stupid administration of hospitals and school systems, is driving many of the finest of these professional people into the protective arms of labor unions.

Need anyone be reminded that we cannot eliminate effects while we persistently ignore causes — that should not be necessary with professional people.

What Price Bikini?

Here's a lesson in atomic economics. A battleship costs about one hundred million dollars. An atom bomb can be made for about a million, and one bomb can take care of at least one ship. If that sounds like good war business, consider this. One bomb of the present type could totally destroy a square mile or more of the average American city. And that represents an automatic loss of five hundred million dollars. Bombing a fleet at sea, the scientists point out, wouldn't be worth the trouble in atomic war.

"Our Defense Is Not in Armaments"

By Albert Einstein

America has a temporary superiority in armament, but it is certain that we have no lasting secret. What nature tells one group of men, she will tell in time to any other group interested and patient enough to ask the questions.

Being an ingenious people, Americans find it hard to believe there is no foreseeable defense against atomic bombs. But this is a basic fact. Scientists do not even know of any field which promises us any hope of adequate defense. The military-minded cling to old methods of thinking and one Army department has been surveying possibilities of going underground, and in wartime placing factories in places like Mammoth Cave. Others speak of dispersing our population centers into "linear" or "ribbon" cities.

There is no radar defense against the V-2, and should any "defense" be developed after years of research, it is not humanly possible for it to be perfect. Should one rocket with an atomic warhead strike Minneapolis, that city would look almost exactly like Nagasaki.

Rifle bullets kill men, but atomic bombs kill cities. A tank is a defense against a bullet, but there is no defense in science against this weapon which can destroy civilization.

Our defense is not in armaments, nor in science, nor in going underground. Our defense is in law and order.

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Kindly report any errors or omissions to the Editor.

National and State Society News

News From The Washington Office

By Paul H. Robbins, Executive Director

Paul H. Robbins

During the last few months of the Seventy-Ninth Congress, your Executive Director has been watching very closely the legislative picture in order to assist the Legislative Committee in whatever action seemed feasible for the Society. A number of proposed bills and congressional action have been surveyed and discussed with the Legislative Committee.

A sub-committee of the House Labor Committee held hearings during the first part of July on the feasibility of amending present labor legislation. N.S.P.E. presented to this committee a statement on behalf of the Society, outlining the present status of labor legislation as it affects the profession, and requesting in broad general terms that future legislation make certain that these present difficulties will be straightened out. Reference to this statement in this issue of the magazine will indicate more fully what was presented.

Several conferences have been held in Washington attended by the Washington Representatives of a number of technical societies. These conferences have discussed the attitudes of the various societies on current legislation, as well as several problems regarding governmental administration having a wide effect on professional personnel. Represented at these meetings have been the American Society of Civil Engineers, American Society of Mechanical Engineers, American Society of Landscape Architects, American Institute of Architects, and the National Society of Professional Engineers.

Labor Legislation

The labor legislation picture, together with decisions affecting the administration of wage and hour standards have received considerable attention by pooling the information of the Societies mentioned above. It has been found that there are trends in the administration of labor laws which it is feared will have adverse effects upon the profession. These administrative decisions are being given careful consideration, and this conference has met with several administrative leaders to discuss appropriate action. It is planned to continue these informal discussions at frequent intervals in order that the benefits of the combined experience of the Washington Representatives may be of value to all concerned.

Liaison has been established with the National Roster of Scientific and Specialized Personnel, whereby members of the National Society of Professional Engineers, through the Washington Office, may avail themselves of the Personnel Placement Service of this Government Agency. Reference to the August issue will indicate details of this arrangement. Liaison has also been established with the Civil Service Commission here in Washington whereby the Washington Office receives announcements of all openings for technical personnel in the Government, and this information is being distributed to the State Secretaries immediately upon receipt.

Conferences with the Chairman of your Legislative Committee have been productive for guidance as to policy and although the adjournment of the Seventy-Ninth Congress does not make a legislative bulletin practical at this time, plans have definitely been formulated for the inauguration of this service to our members upon the convening of the Eightieth Congress.

We're Growing

The growth of membership in the Society continues to be encouraging. With the advent of two new State Societies this year, Michigan and Nevada, our Member State Societies now total twenty-five. It is interesting to note that the State of Michigan now counts 270 members in its affiliation. It is rapidly becoming an aggressive part of our organization. We currently have 57 Members At Large in New Mexico. It is hoped that these members in New Mexico will soon band together to form a New Mexico Society of Professional Engineers and will ask affiliation with the National Society.

The responses to the emergency fund continue to be gratifying. Several of the states have given further support to the fund during the summer months. As a result, the total number of contributors now stands, as of August 1st, at 927, totalling $8,481.00. In a percentage of contributors, Illinois, Missouri, and Kansas, stand first, second and third; in the total amount of contributions, New York, Ohio, and Pennsylvania stand first, second, and third.

Coming Events To Remember

The usefulness of this column can be greatly increased if State Society officers will make a point of notifying the Editor of the American Engineer of the time and place of all coming State meetings of importance, well in advance. With this information thus made available, National officers, as well as the officers of other State Societies can plan their trips, and integrate their itineraries in a way to facilitate their attendance at such gatherings of engineers.

National Meetings

Oct. 27, AM., NSPE Board of Directors Meeting, St. Louis, Mo.

Oct. 27, PM., Joint Meeting of the ASPE and the NCSBEE Boards of Directors, St. Louis, Mo.

Oct. 28, AM., NSPE Board of Directors Meeting, St. Louis, Mo.

Dec. 6, NSPE Board of Directors Meeting, Atlanta-Biltmore Hotel, Atlanta, Ga.

State Meetings

Sept. 19, 20, 21, Annual Convention, West Virginia Society of Professional Engineers, Huntington, W. Virginia.

Sept. 20, Penna. State Executive Committee, Harrisburg, Headquarters Office.

Sept. 21, Penna. State Executive Board Meeting, Harrisburg, State Chamber of Commerce Building.

Nov. 8, 9, N. Y. State Society of

Professional Engineers, Fall Meeting, Hotel Syracuse, Syracuse, N. Y.

Dec. 6, Third Annual Meeting, Georgia Society of Professional Engineers, Atlanta-Biltmore Hotel, Atlanta, Ga.

Jan. 24, 25, 1947, Annual Convention, Illinois Society of Professional Engineers, Abraham Lincoln Hotel, Springfield, Ill.

Feb. 12, 13, Annual meeting, Minnesota Association of Professional Engineers, St. Paul Hotel, St. Paul, Minn.

Feb. 14-15, Minnesota Federation of Engineering Societies, Exposition and Conference, St. Paul Hotel and Auditorium, St. Paul, Minn.

March 20-22, Ohio Society of Professional Engineers Anuual Convention, Deshler Wallick Hotel, Columbus, Ohio.

Military Manuals and Operation Instruction on Mobile Machine and Welding Shops

The Washington office of the National Society of Professional Engineers has received a complete set of the Military Manuals and Operation Instructions of the "Couse Type Mobile Machine and Welding Shops."

These manuals are profusely illustrated, and consist of thirteen volumes, 8½ x 11 inches in size, and will occupy about 6 inches on your book shelf.

We are advised by the Couse people that this material is available without cost to technicians in this field. If you are interested, mention the American Engineer and write direct to Couse Manufacturing, Inc., 300 Passaic Street, Newark 4, N. J.

The Emergency Fund Still Going Strong

"Slow but sure" describes the way the contributions have been coming in during recent weeks of President's Lawrie's campaign to finance the expanded policy program for the year 1946. The encouraging sign is that contributions and encouraging letters are still coming in. We list below the names of the most recent contributors to this Fund:

F. C. Tromel, 2232 Clifton Park Road, Schenectady, N. Y.

Robert Starr Allyn, 31 Park Row, New New York 7, New York.

H. L. Senseman, Detroit, Michigan.

Everett B. Moore, 29 Bradford Road, Schenectady, N. Y.

Michael Mihalyfi, 2585 Botanical Sq., New York, N. Y.

A. V. Sheridan, New York, N. Y.

James H. Monross, Syracuse, New York.

Harry E. Loomis, Syracuse, N. Y.

W. A. Oliver, Urbana, Ill.

Gordon E. Bodien, 1307 E. 54th St., Minneapolis, Minn.

A. H. Whysall, 186 Hackensack St., East Rutherford, N. J.

Jno. C. White, Madison, Wisc.

H. J. Dawson, 231 Union Bldg., Syracuse, N. Y.

Bernard M. Dawson, 231 Union Bldg., Syracuse, N. Y.

Marvin J. Udy, Niagara Falls, N. Y.

A. F. Hinrichsen, New York, New York.

Howard S. Claybaugh, Minneapolis, Minn.

James V. Ferry, Atlantic City, N. J.

T. C. Forrest, Jr., Praetorian Building, Dallas 1, Texas.

Harold G. Rice, Rome, New York.

Wilford Wyburn, Bogota, N. J.

New York County Chapter, N. Y. S. S. P. E., 1941 Grand Central Terminal, New York 17, New York.

Walter A. Peirce, Racine, Wisc.

E. H. Praeger, N. Y., N. Y.

Gustave H. Karlsteen, N. Y., N. Y.

J. W. Wunsch, New York, New York.

Wm. S. Elliott, Elmhurst, Long Island, N. Y.

Frank L. Wadsworth, Dresden, N. Y.

Howard C. Kane, Kenmore 17, N. Y.

John C. Riedel, New York, New York.

Arthur G. Hayden, Bronxville, N. Y.

James S. Bixby, Poughkeepsie, N. Y.

H. R. Towse, New York, New York.

Wm. G. Grove, Hartford, Conn.

Richard R. Ranson, Madison, Wisconsin.

Robert G. McDowell, Lynbrook, New York.

Hans B. Lippelt, Ozone Park, New York.

Much Praise Coming in For NSPE.'s "Autobiography"

In a Society composed of "many men of many minds," it is seldom found possible to "please everybody." Nevertheless just about everyone seems to be enthusiastic about our new pamphlet telling about the history, status and objectives of the National Society of Professional Engineers.

One comment from a State Executive Director reads, "I cannot recall reading anything in many years that was enjoyed more than this 'nine.' Someone is surely to be complimented upon this work. It is right to the point — I simply could not have done it better myself . . . and that is saying a lot, isn't it."

Another from a University Dean of Engineering: "May I take this occasion to congratulate you upon the Autobiography of the NSPE . . . I read it through with a great deal of satisfaction and feel that you have placed the case of the National Society of Professional Engineers in a very effective manner before its members and friends.

We feel that under these circumstances it is entirely fitting and proper that due credit and appreciation be accorded the man who wrote this Autobiography, none other than the Managing Director of the New Jersey Society of Professional Engineers, Charles J. Dodge.

Take a bow, Mr. Dodge.

N.S.P.E. Executive Committee Meeting, Atlantic City, New Jersey, July 17, 1946

Under date of August 1, the National Directors, State Presidents, and State Secretaries received the following report of the action of the Executive Committee at its meeting in Atlantic City on July 17. Since the items discussed were of interest to all members of the Society, we are reprinting this report for the information of the readers of "The American Engineer."

National Dues

A problem in which not only State Societies, but each individual member is keenly interested is the problem of the proposed dues for the National Society beginning January 1, 1947. The National Directors will recall that the Ohio State Society presented to the National Society a resolution recommending re-consideration of the Board's previous action raising the dues to $10.00 and recommended instead that the dues be $7.00 per year when collected by Member State Societies, and $12.00 per year for Members-at-Large. There has been considerable discussion both among the officers and the members of N.S.P.E. on this subject. The members of the Executive Committee have discussed it at length whenever they have met with any group of N.S.P.E. members.

We are sure that every member of the society is aware of the aggressive program we are contemplating and knows that such a program can be fostered only if sufficient funds are available. Recognizing this, however, many of our thoughtful leaders have felt that the increase to $10.00 would have a deterrent effect upon maintaining our present membership and upon securing the additional membership for which we are so earnestly working. After considerable discussion the Executive Committee unanimously

recommended that the Board of Directors approve the Ohio resolution and that the By-Laws of the Society be amended accordingly.

Membership Campaign

The fervent hope was expressed that the lower dues could be used by each member and each State Society to foster an even more aggressive campaign for membership and that through the increased membership we would not only have the finances with which to accomplish our program but the backing of an ever increasing number of professional engineers. It is felt that for the good of the Society the more engineers we can affiliate with N.S.P.E. the more effective our program and policy can become. It is hoped that you will make this decision known to the membership of your Society and that you may plan your membership drives and local activities to accomplish the objectives of membership and finances outlined in the Program of Policy of the Society.

Committee on Economic Status of the Engineer

A report of the activities of the committee of the Engineers' Joint Council on the Economic Status of the Engineer was presented by Mr. John Kennedy for consideration of the Executive Committee. It is the understanding of the Executive Committee that each member of the Board of Directors of N.S.P.E. has received a letter from Mr. Bailey of this committee which contained a questionnaire on "Survey of Employer Practice Regarding Engineering Graduates," and a two page pamphlet outlining the work of the committee. It is requested that particular attention be given to this booklet in order that Members of the Board may be fully informed of the work of this committee. Your Executive Director and President were asked at an earlier date to comment on the questionnaire referred to above. A copy of these comments was sent by your Executive Director to Mr. E. G. Bailey, Chairman of the subcommittee concerned with this survey and a copy was attached for your information. Mr. Kennedy indicated that it is the hope of this committee that a manual on collective bargaining for professional engineers will be forthcoming in the near future. The Executive Committee urged Mr. Kennedy to encourage the early publication of this manual.

American Engineer

As indicated in the June issue of *The American Engineer* extensive consideration was given by the Executive Committee to the proposal for the increased circulation of *The American Engineer* to all professional engineers in the country. Sufficient information, however, was not available at the time of the meeting to indicate the exact cost to the Society or the commitments and underwriting that would be necessary. It was felt that the Society was not financially in a position to embark upon this program at this time. The committee therefore tabled any further action or consideration on this increased circulation for the immediate future. The Publications Committee was unable to indicate the opinion of the membership regarding this question since replies from National Directors and State Presidents indicating the support which their societies can give have not been received. Such replies will be extremely helpful to the committee and it is urged that they be forwarded in the near future.

Plans were discussed for the joint meeting of the N.S.P.E. and N.C.S. B.E.E., Boards of Directors to be held the latter part of October in St. Louis. The Executive Committee expressed the hope that every member of the Board will make plans immediately to be in attendance at this meeting as plans for further activities toward the Program of Policy will be discussed.

NSPE Annual Meeting

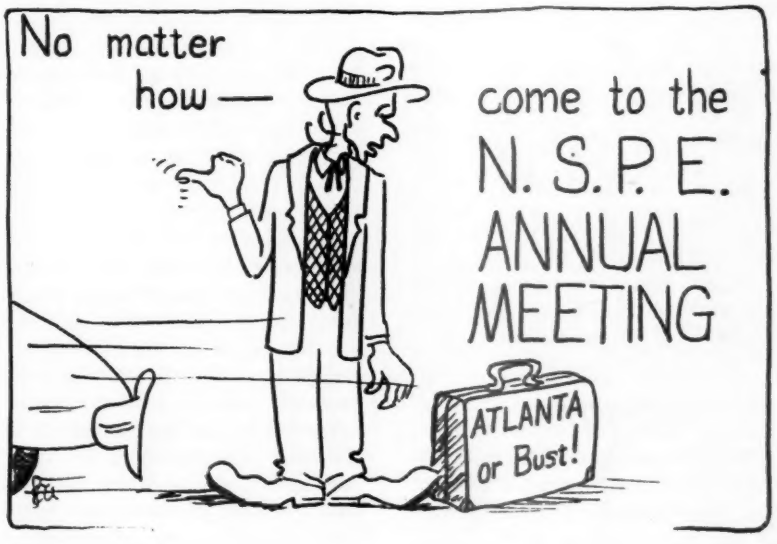
In addition to the items mentioned in this report, Vice-President Hale, of the Southern Area, gave an extended review of the plans for the Annual Meeting to be held in Atlanta on December 4, 5, 6, and 7th. He indicated that the Georgia Society of Professional Engineers. is going "all-out" in efforts to make this meeting a most successful one. The Executive Committee voted to emphasize the program of the Annual Meeting and to encourage any and all members of the National Society to be in attendance during these sessions. Reports of the Committees will be given at the Annual Meeting, and plans for the future activities of the Society will be outlined.

It is hoped that every reader of "The American Engineer" who can attend the Annual Meeting will make plans now to be in attendance together with his family. You may be assured that an attractive program and the best of facilities are being planned by the Georgia Society.

American Engineers Speak at World Technical Congress

The American Committee for the International Technical Congress, meeting in Paris, France, Sept. 16-21, includes representatives of the "Founder" engineering societies, as follows: Clarence E. Davies, Secretary of the ASME, chairman; W. N. Carey, of ASCE; A. B. Parsons, of AIMME; H. H. Henline, of AIEE; and S. L. Tyler, of AICE.

Part one of the American program deals with general engineering problems of reconstruction. Harry A. Winne, vice-president of General Electric Company, Schenectady, speaks on nuclear energy, as a feature of part two. Part three deals with Scientific



Management (in *industry*), while part four features discussions relating to "Engineers in the United States."

Some twenty prominent engineers from the United States are taking part in the speaking program. The object of the Congress, as stated by the French committee is "to emphasize the universal character of the great engineering problems arising out of the reorganization and development of world economy."

ILLINOIS

Many Chapters of the Illinois Society of Professional Engineers hold some of their summer meetings in the form of picnics. The Joliet chapter had its picnic on June 22, Lake County chapter in July, the Egyptian chapter on July 27 and the Rock River chapter on August 3.

The committee on Fees and Salaries composed of L. A. Miller, E. J. Wade and George Ackerman is publishing monthly in the Illinois Engineer the U. S. Department of Labor all-item index to allow the easy adjustment of salary agreements as required by the Schedule of Minimum Fees and Salaries for General Engineering Services.

A personal continuous effort is made by all officers of the State and Local Societies to get new members to the N. S. P. E. A result can be seen in the fact that while in the whole year of 1945 only 4 members joined N. S. P. E., in the first six months of 1946 there were 72 members joining.

On July 19 came the expiration of the time when registration could be obtained under the grandfather clause of the Illinois Professional Engineering Act. At that time about 16,000 applications were filed with the Department of Registration and Education, of which probably 15,000 applications may be approved by the committee.

That the Illinois engineers feel strongly for enforcing the registration law can be seen from the fact that already two complaints of violations are under legal investigation.

MICHIGAN

Engineer Steve Szabo, who will finish out the year as temporary President of the *Michigan Society of Professional Engineers* announced that there were 261 members in the new Michigan Society. That is fine progress for a society which recently received an NSPE charter.

One chapter has been formed in the *Saginaw Valley* and President Szabo reports that in the fall plans now under way should result in the formation of chapters in *Detroit, Flint, Lansing, and Ann Arbor.*

There are now about 4000 PE licensees in Michigan. With Engineer Szabo's gift for organization, the Michigan Society should approach 1000 members shortly.

Our best wishes go to Michigan and her gallant president protem.

MINNESOTA

Many of you have sent in your voluntary contributions to NSPE's emergency fund. We appreciate that. But there still remain many members who have neglected this very important professional duty. The program that we help to finance in this way will benefit each and every one of us in the days to come. And the time to launch this program is *today.* Minnesota has been a leader in all such progressive movements. We must maintain that record.

President McWethy and Mr. Borne have been conferring this past month with Mr. Shepard, Chairman of the Registration Board, concerning presentation of registration certificates at M.A.P.E. meetings. Mr. Shepard took up the matter with the Board, which approved the Ohio plan of giving certificates to newly-registered men at meetings sponsored by the Board and M.A.P.E. A joint meeting of Districts 4 and 5 is planned. It is hoped that Mr. McKellip, who has served on the Board for 25 years, will be on hand to present certificates to new engineers and engineers-in-training who have passed the examination.

Al Kircher of Mankato, retiring President of the League of Minnesota Municipalities and President of M.A.P.E., reported on the new organization of city engineers and public utility engineers affected, at the recent Brainard annual convention of the League. The new group will be a state affiliate of the American Public Works Association and will be at the same time a section of the League organization as well as an integrated group within M.A.P.E. The future proceedings of this group will be watched with friendly interest.

The Minnesota Association of Professional Engineers has just issued a pamphlet for implementing the membership drive. It contains a statement of the aims, purposes and achievements of M.A.P.E., its form of organization and its district components, as well as its relationship with NSPE and, through that, with similar societies of other states. Many cogent reasons are given why every qualified engineer should first register under State law and then join M.A.P.E. — all in order to promote the advancement of professional engineers. W. G. Klett and T. S. Thompson collaborated with Secretary Richard Price in the preparation of the brochure.

NEW JERSEY

The New Jersey State Society is justly proud of what it calls the N.J.S.P.E.,

Legislative Box Score

The State Society's managing director, Chas. J. Dodge is responsible for working out the details.

As illustrating what can be done when professional engineers really go after the legislative matters that come within their field of special knowledge and interest, the following statement, approximately as worked out by Mr. Dodge, may be interesting to all State Society legislative committees. The comparison is made between two periods, the first from 1940 to the end of the year 1945, and the second the brief period January 1, 1946 to March 1st, 1946.

1940 to Jan. 1, 1946
(five years)

* Bills Introduced .....One
** Bills Sponsored .....One
*** Bills Co-sponsored .....None
**** Bills officially opposed as against interests of P.E.'s .....One
***** Bills endorsed, directly or indirectly benefitting P.E.'s.....None

Jan. 1, 1946 to Mar. 1, 1946
(two years)

* Bills Introduced .....Two
**Bills Sponsored .....Two
***Bills Co-sponsored .....One
**** Bills officially opposed as against interests of P.E.'s .....One
***** Bills endorsed, directly or indirectly benefitting P.E.'s .....Two
* and **

Senate—92. Introduced February 4, 1946, through Senator Stanger. Gives legal recognition to the training of future candidates for licenses as Professional Engineers during period in which they acquire the training and experience required for a full professional license. Engineer-in-Training program. Referred to Judiciary Committee.

* and **

Assembly—373. Introduced February 11, 1946, through Assemblyman Mehorter. Regulates practice of engineering and land surveying by corporations, partnerships and associations. Provides an attendance fee for members of the state Board, and makes other amendments affecting board meetings. (Makes *unlawful* the indiscriminate use of terms "engineer" and "engineering." Chief executive officer or a partner must be licensed.) Referred to Judiciary Committee.

***

Assembly—193. Introduced February 11, 1946, through Assemblyman Preiser. Co-sponsored with N. J. Society of Architects, Building Contractors' Assn. of N. J. and N. J. Building Inspectors' Assn. Provides for a Standard Building Code of N. J. to be prepared by State Dept. of Economic Development. Referred to Judiciary Committee.

1. Permissive—*not* mandatory.

2. Code advertising would be by reference not verbatim, thus eliminating prohibitive costs.

Our Legislative Committee considering necessary changes.

****

Assembly—47. Provides for reorganization of State Health Dept. Officially opposed by N.J.S.P.E. at a public hearing on February 4, 1946.

1. Would provide a council of seven with no specific qualifications. Present Board has two Sanitary Engineers.

2. Gives Commissioner (a physician) supervision over plans and specifications for construction, alteration and repair of public water supplies, sewage systems, sewage disposal plants, etc.

3. Gives Commissioner supervision over Industrial Hygiene and environmental engineering programs now efficiently carried out by Professional Engineers of Labor Dept. (NJSPE voice was a major factor in decision to revise bill.)

*****

Senate—76. NJSPE endorsement was solicited and given. Bill makes licensure mandatory instead of voluntary for operators of certain classes of power and steam generating equipment. (These operators are, in many cases, necessary adjuncts to Professional Engineers.) NJSPE endorsement is having a definite effect toward affirmative voting.

*****

Bill unnumbered at time of publication. Provides that no person can examine or approve plans and specifications for architectural or engineering work unless such person is registered as an architect or licensed as a professional engineer of New Jersey. Facts of introduction uncertain at time of publication. Our endorsement solicited and given.

Up to July 1st, the nine Chapters in New Jersey had enrolled 178 new members since January 1st, 1946. This brings the total membership to 1,263.

An important progressive step toward the mutual understanding of professional and trade customs and the interpretation of procedures and regulations has been taken by New Jersey Professional Engineers, Architects and Building Contractors. At the invitation of Damon Douglas, President of the New Jersey Building Contractors Association and a member of the New Jersey Society of Professional Engineers, a joint committee has been formed with at least 3 representatives of each organization. Already a number of semi-monthly meetings have been held with tangible and beneficial results.

Such collaboration and democratic ironing out of existing difficulties is indeed a healthy sign and should prove advantageous not only to the organizations concerned but to the general public as well. As an indication of this, just consider the new State Uniform Building Code law. This legislation was sponsored in the 1946 legislative session by all three and, through their joint efforts, it was finally enacted into law. Certainly it is timely and badly needed, because many existing New Jersey codes have been in the obsolete category for years. It is interesting to note that it is permissive legislation and not mandatory—a municipality may or may not adopt it. And if it does, the code may be advertised by reference and not verbatim, thus eliminating prohibitive costs. President Kramer has appointed the following three outstanding engineers to represent the State Society: Richard L. Higgins, Oliver Wells and Walter G. Benner.

An excellent contact has been made with Station WAAT and we are invited to utilize time at no expense on a weekly or semi-monthly basis provided of course, that we can prepare scripts on engineering subjects that would be interesting to the listening public.

NEW YORK

The New York County Chapter has contributed $100 to the National Society's Emergency Fund, as a direct contribution in addition to the contributions made by members of the Chapter.

The New York State Society of Professional Engineers will hold its fall meeting at the Hotel Syracuse, Syracuse, N. Y., on Friday and Saturday, November 8 and 9.

At the eighteenth annual meeting of the New York County Chapter, President Bechtel presented an engraved pen and pencil set to National Vice President James F. Fairman, member of the Kings County Chapter. This gift was in recognition of Mr. Fairman's having been the individual responsible for obtaining the largest number of new members for our Chapter during the past year.

Westchester County Chapter of the New York State Society steps out in front again. Our good friends in this Chapter tell us that whenever anything big, sensational or worthwhile in engineering circles takes place it *of course* originates in good old Westchester.

At its last monthly meeting the Chapter voted a $200.00 contribution to the National Society to assist in carrying out their stepped up program for 1946.

Also, at the same time the Westchester County Chapter issued a challenge to all other chapters or State Societies to match this donation.

The National Society hopes that others will follow soon the action of the Westchester County Chapter and contribute generously towards the National campaign.

President Burke, Of the N. Y. State Society Writes "Let's Put It Over"

Excellent letters urging increased contributions to President Lawrie's Emergency Fund, have been sent out by State Society Officers. Among the most resultful of these has been one going out to "All Members of the New York State Society," over the signature of Charles W. Burke, President.

Records in the Headquarters Office in Washington indicate that since the date of Mr. Burke's letter on July 12th, 31 contributions have been received from New York State, totalling $415.00.

As an example of the kind of letter that gets results, and possibly also as a suggestion for State Society Presidents who may want to get out a special appeal to their membership, we are reproducing Mr. Burke's letter in full:

Let's Put It Over

The "one-shot" drive of the National Society of Professional Engineers to finance (this year only) its expanded program for the benefit of all professional engineers is not making the progress which is essential if all contemplated activities are to be initiated before 1947. As of June 1, a total of but $7,512 had been realized — only 15 per cent of the goal.

NYSSPE, with 7.5 per cent of its members contributing (compared with a national average of 7.55 per cent and a maximum of 21.26 per cent in Illinois), ranked 18th among the 24 states supporting the drive. Although we top the list in total contributors (141) and t o t a l contributions ($1,290), we are 9th in the average amount per donor — $9.14 compared with a national average of $8.84 and a maximum of $17.50.

We, as the second largest state society, cannot — must not — be content to occupy any lesser rank in percentage of members contributing or the average amount per donor. Nor, for our own sake as well as that of the entire P.E. movement, can we afford to do less than our reasonable share toward raising the emergency fund of the national society.

Accordingly, although each and every one of you should "buy" a share in this "insurance" of your future, we have set the quota of NYSSPE at a mere $4,000 from 400 contributors.

If you will reread the letter President Lawrie sent you in February and, particularly, the "Program of Policy" which accompanied it, I am certain that we will find our assignment an easy one. Also, don't forget Jim Fairman's thought that, by making your contribution from the savings effected through the 50 per cent reduction in the 1945 state income tax, you are not affecting your budget in any way as you are giving money you did not expect to have.

I know that I can count on your strong support in this final appeal for NSPE. Give *now*, while the matter still is fresh in your mind. Make your check payable to the National Society of Professional Engineers and send it to the National Press Building, Washington, D.C., at once.

Sincerely yours,
CHARLES W. BURKE
President, NYSSPE

P.S. If you've already made a contribution, why not "ante up" again. The need is urgent.—C.W.B.

The Ethics and Practice Committee of the Erie County Chapter is giving consideration to a suggestion that a form for which engineers could use in advertising be prepared and approved.

OHIO

The Board of Registration at last reports still had 3,000 of the 4,000 applications received last December to consider. Tell your engineer friends to be patient.

Engineer C. E. Frome, formerly of Cincinnati, and since 1930 in Hawaii, upon becoming registered in Ohio, sent in his "Membership at Large."

The July examination was the largest ever given by the Ohio State Board of Registration. Over 500 applicants were notified of the examination. There were 213 who filed their intent to take the examination and 196 who arrived on the scene. The largest group was the mechanicals with 85 present.

Talk about the "tide in the affairs of men," etc., does this mean anything to you of the membership committees? For the first 12 years after the registration act was passed in Ohio, many qualified men did not become registered. That situation changed very rapidly in 1945 when some 7,000 persons applied for registration. What brought about this flood? Obviously is was not the existence of the law itself, but it was the *urgency of registration, now!* that captured the attention of our members and sent them out as "ambassadors ordinary" to do missionary work for the Professional Movement.

Chairman Moellenkamp of the OSPE Membership Committee reports that 7 of the 27 Chapters have "accepted their assigned quota for the membership campaign." This "honor list" consists of Akron, Central Ohio, Dayton, Lake Erie, Miami, Toledo, Springfield and Mahoning Valley.

The Special Session of the Legislature amended the Engineers and Surveyors' Registration Act to give all Engineering College Graduates (previous to January 1, 1946) who were or are in Military Service, a chance to register by exemption. They will have 6 months after the effective date of the Act (June 1946) or 6 months after they are out of military service, whichever is later, to file their applications.

The new Akron Chapter membership directory gives the home address and business address of all members. It is a unique directory and was sent, together with other literature relative to OSPE, to all non-members in the territory.

At a dinner meeting of the Maumee Chapter, with 44 present, it was reported that the Chapter is growing by "leaps and bounds." The Chapter's interest in civic affairs was shown by a report from Engineer Hawisher, its official representative on the citizen's planning committee.

Evidence of the "live spirit" permeating the Miami Chapter was its entertainment of 12 seniors of the Middletown High School at a May 29th luncheon. As a matter of course, under the circumstances, membership of the Chapter still climbs. Membership trophy aspirants better watch Miami.

OSPE President A. C. Neff spoke at a recent meeting of the Midwestern

Chapter, choosing as his subject "The Professional Society."

The question, "Shall we eliminate licensing by branches?" was a matter under discussion at a recent Executive Committee meeting. The National Society and the National Council of State Boards of Engineering Examiners will be contacted to discover the present trend of thinking on this subject.

"The first year of operation has seen Ohio State University's five-year engineering curricula even more enthusiastically received than had been anticipated," according to Dean Charles E. MacQuigg of the College of Engineering.

Although students who had started engineering courses before being called to military service have a choice, until October, 1947, between the four-year and five-year programs, Dean MacQuigg reports that a surprising number of these men have elected the longer course upon their return to school. All new engineering students must now take the five year program.

"In five years," the dean says, "students have the opportunity to build a stronger foundation of engineering fundamentals. The greatest gain, however, will come in the number of broadening courses which are intended to give engineering students a letter understanding of the social, economic, and political forces at work in our society."

Under the new plan, superior students may follow a specially designed series of courses in the fourth and fifth years and attain a master's as well as a bachelor's degree. Other students will receive the bachelor's degree only, but they will have had a humanistic training not possible in four years, according to MacQuigg.

The Navy department has selected Ohio State University's department of industrial engineering as its depository for a valuable gauge laboratory now being set up in the Industrial Engineering building, Dean Charles MacQuigg of the College of Engineering announces.

The high-precision equipment, worth thousands of dollars and difficult to obtain on the open market, is awaiting opening by naval ordnance inspectors and it is expected that the laboratory will be in operation for the fall quarter.

The selection of Ohio State's industrial engineering department to handle work in the laboratory makes OSU one of the few schools in the nation with this equipment and training opportunity.

The new gauge testing center will be used to train students in high precision work and gauge checking and testing. It also will serve as a research center on quality control projects and will be available for testing products being made for the navy, as well as for other naval ordnance department uses.

PENNSYLVANIA

At the June 22nd Executive Board meeting, Chairman Christman recommended that the Executive Board accept the resignation of Russell S. Conrad as Executive Secretary which became effective in fact on April 30, 1946, and that Engineer Conrad be presented with an appropriate resolution thanking him for his valued services during the struggling years of this organization. It was moved and seconded to accept the resignation and Engineer Paine submitted a resolution which was adopted.

Chairman Christman further recommended that the Board elect Vice-President Victor J. Snyder, who has been Acting Executive Secretary, to be Executive Secretary until our next Annual Meeting in January 1947, with pay at the rate of $360.00 per annum, retroactive to May 2, since which date he has been functioning with efficiency and dispatch. It was so moved and seconded. Motion approved.

The Executive Committee has instructed the Constitution and By-Laws Committee to promptly review the Constitution and By-Laws of the Pennsylvania Society of Professional Engineers and make such recommendations as will make the Society more democratic; give Chapters representation on the Executive Board based on membership; and give members the option or elective right as to what bodies of the Society they may wish to belong.

Your Secretary visited the new chapters at York and State College and aided with the organization proceedings. Also visits will be made to the organization meetings at Pottsville and Williamsport. This office has rendered aid to these chapters in preparing and providing the necessary instructions and forms, along with other favors, required by them in order to supply the proper support to start the new chapters off correctly.

The newspaper advertising campaign, put on by PSPE, explaining the provisions of the new Registration Law, resulted in a flood of mail which swamped the facilities of the State Office. Over 500 applications for registration have been mailed by request to applicants in cooperation with the State Registration Board, whose offices also are swamped with mail. It is reported that the combined circulation of the newspapers carrying the Society's story on the new Registration Law, total 2,950,094.

WEST VIRGINIA

The Board of Directors of the West Virginia Society of Professional Engineers submitted the following resolution to the Legislative Committee: "That the Legislative Committee consider raising the State dues of full members of the Society from $4.00 to $6.00 and of Associate members from $3.00 to $5.50.

The Eighth Annual Southern Appalachian Industrial Exhibit was held at Bluefield on August 22, 23 and 24. More than 160 of the country's leading manufacturers of equipment used in the coal and allied industries took part, the largest number in the history of the exhibit.

Every booth available in the spacious N. & W. freight terminal, scene of the exhibit, was taken. This exhibit has not been held during the four war years and is one of the few shows of its kind being attempted even this year.

The keen interest in this year's exhibit is explained by the fact that manufacturers are eager to show the many truly amazing pieces of post-war equipment that have been developed. All of these are certain to add to the efficiency of coal and related industries.

As an interesting feature of the program, there was the annual reunion of the pioneer miners of this section, with handsome cash prizes for those that have worked in and around the mines for the longest periods, those with the longest continuous employment record with one company, and those with the best safety records.

The Committee on the State annual convention, has accepted the invitation of the Huntington Chapter, and will hold this meeting there on September 19-21.

A special committee has recom-

mended that a membership emblem pin, costing $5 each, be adopted by the State Society. The State secretary is now canvassing the State Chapters to learn how many members would want these emblems.

The total membership of the West Virginia Society of Professional Engineers, as of August 1, 1946, was 726, of which 258 are Associate members; 24 are Junior members and 2 are members in the Armed services.

WISCONSIN

President Seeger believes that engineering magazines should have a column devoted to humor. Of course there is one objection to that, for you're always in danger of offending the chap who doesn't have much of a sense of humor.

With Dean Withy as Chairman of the Registration Board, all engineer member of the Board are now members of the Society. The next step is to get all the registered engineers as members. That's up to each and every one of us.

At the invitation of Prof. Leonard Hillis and P. H. Thern a group of members from Dane, Rock and Sauk Counties met at the Mechanical Engineering Building in Madison on June 28 to consider the formation of a new Chapter. A petition for the formation of a new chapter to include Dane, Green, Sauk, Columbia, Jefferson and Rock Counties was prepared for submission to the Board of Direction at its next meeting.

The reinforced concrete arch design developed by Charles S. Whitney, Vice-President of our Society is being used in the construction of two American Airlines hangars built in Chicago. The dual hangars will be 600 feet long and have doors 41 feet high and 235 feet wide.

Charles J. Campbell, who resigned as Director of the Society when he became associated with Alvin H. Johnson & Company, Consulting Engineers, New York City, has returned to Wisconsin and is again affiliated with the Kimberly-Clark Corporation at Neenah.

Construction's Progressive Role

(*Continued from Page 6*)

per cent. Reducing these percentages to a simpler form shows that by doubling investment in the job, we have been able to increase wages two and one-half times.

These figures all point to one moral, known to you but not given sufficient weight by many, namely, that the welfare of the worker can be promoted in only one way — by increasing his productivity. That economic truth holds regardless of government. It is as true in a totalitarian state as in a democratic state. Of course government can increase purchasing power arbitrarily. We have seen that. But the results of such actions are frothy —devoid of substance.

Now let us look ahead. With a job investment of $6,000 in 1939, we were producing a certain volume of economic wealth. My thesis is that to increase that volume, we must increase the investment in the job. If this thesis be accepted, we may look forward in the near future to an increase in investment in the job to the extent of one or two thousand dollars each, an investment in the aggregate approaching 100 billion dollars. It is Construction men who will convert those dollars into useable facilities. That is Construction's Progressive Role.

Technological Responsibilities

(*Continued from Page 11*)

ments will be reached too late. A more whole hearted effort toward making decisions is needed.

By Harry A. Winne,
Vice President Gen. Electric Co.,
Schenectady, N. Y.

Today, one year following the first military use of the atomic bomb, the U.N. Atomic Energy Commission is just coming to grips with the problem of working out some plan to prevent atomic warfare, with its unthinkably dire consequences, and at the same time to permit and promote the beneficent uses of atomic energy. This is a tremendously difficult problem, one whose solution will require measures of international cooperation above and beyond anything in our previous experience. Yet it is a problem which must be solved, and solved quickly, if we are to have any peace of mind in the future. Therefore it is the duty of every citizen to study and understand the political questions involved, which he can do even though he has no scientific or technical knowledge. I feel that in the work of the Commission there will be many occasions when our representative will need the support, and guidance, of public opinion must be based on a well-informed understanding if worthwhile results are to be achieved.

The present price control bill is described as, "a price control in name only. It is another attempt by Congress to exterminate price control without taking the responsibility for its act." And a critic of this critic rejoined, "What do you expect of politicians?"

There is a tendency for men to make their moral standards correspond with their material interests, and for seeing virtues that advance their power. The vocation of politics apparently enhances that tendency.

Not everybody is against war today. In June the United Press sent an item to all newspapers, which quoted a prominent church leader as follows: "A third world war is inevitable, and if fought immediately . . . it would save more lives and more destruction than a delayed war . . ." All but a tiny fraction of the papers suppressed the item.

Very frequently men accused of murder claim they acted only "in self-defense." Likewise among the nations of the world, their imperialisms and other aggressions are invariably defended as necessary, "for defense of the realm."

One man's crackpot is often another man's savior—in religion, in economics and in politics. This will remain the case probably, until we get around to installing a real system of educating the human mind.

War has been described as "An emotional drunk, which nations acquire when their leaders are too weak or too preoccupied with selfish aims, to enable them to face the economic problems which are at the bottom of our irritations."

And there is the oft repeated story of the legislator who had a dream. He dreamed he was making a speech —on atomic energy or OPA, and when he woke up, *he was.*

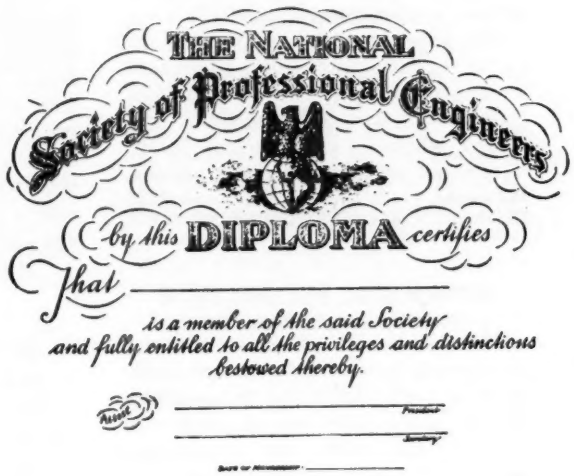
Fellow Engineer:

This Emblem

has been adopted by the Society and is of gold enameled in black. The name and membership number is engraved on the back and the emblem is mounted as a pin or charm. Price $5.00 plus $1.00 Federal Jewelry Tax, a total of $6.00. These emblems are available only to members of the National Society of Professional Engineers.

MEMBERSHIP DIPLOMA

17 x 20 inches, suitable for framing, is available to members. Price $1.50.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by this DIPLOMA certifies
That
is a member of the said Society
and fully entitled to all the privileges and distinctions
bestowed thereby.

Remittance must accompany order and be made payable to the National Society of Professional Engineers.

ORDER BLANK

NATIONAL SOCIETY of PROFESSIONAL ENGINEERS
NATIONAL PRESS BUILDING
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submit herewith my order for the following for which remittance to the amount of..... dollars is attached.

EMBLEM: Mounted as a pin ☐ As a charm ☐ DIPLOMA ☐

Book Reviews

DATA BOOKS FOR CIVIL ENGINEERS Volume 1 DESIGN

By Elwyn E. Seelye

This is the first volume of a three-volume series that provides a concentrated collection of the data necessary to design, place under contract and construct all types of civil engineering structures. The compilation is of an inclusive character and will be useful to all workers in the field of civil engineering, not only as a reference manual but also as offering basic data concerning current practice which could otherwise be obtained only after extensive research.

The book contains many original plates of unusual interest, such as those showing methods for rapidly figuring combined flexure and axial stress in columns, those showing the development of highway transition curves, and those showing safe loads on manhole and catch basin covers and on sewer pipes. Explanations and derivations have been largely eliminated, as the notes on the plates give the necessary explanation and guidance. The volume may be described as unique in engineering literature, for it combines maximum data with a minimum explanation.

This volume, which will be followed by Volume 2, covering Specifications and Costs, and Volume 3, devoted to Field Practice, will certainly fill a long-felt want.

417 pages, Cloth, 9¼x11½, Illustrated, $7.50
JOHN WILEY AND SONS, INC.

MANUAL FOR WATER PLANT OPERATORS

By A. A. Hirsch

This is an up-to-date and practical book for water supply and sewerage system operators, and can also be used as a reference book for clearing up doubts and solving many difficult problems encountered often in the operation of these plants.

All phases of water purification processes are well covered. A special effort has been made by the author to include the latest developments in water technology in the book, and an accurate and comprehensive picture of correct operating practice is given in clear and simple style.

The book is written for the practical man and contains all the information a truly competent operator should have.

368 pages, Cloth, 5¾x9, Illustrated, $6.50
CHEMICAL PUBLISHING COMPANY, INC.

TRACK AND TURNOUT ENGINEERING

By C. M. Kurtz

This is the third edition of a practical handbook for railroad track engineers, transitmen and design draftsmen for the laying out of turnouts and crossings. Mathematical treatments of problems of track layouts and connections are worked out in detail with the aid of numerous drawings. It is assumed that the user of this advanced treatise has the necessary knowledge of geometery and trigonometery, and is familiar with common circular curve of track layout.

The first edition, a small handbook entitled "Modern Location of Standard Turnouts". It filled a gap in railroad engineering literature and was well received. When it went out of print it was greatly expanded and a second edition was published in 1927.

The new third edition features the use of the latest mechanical equipment in connection with roadway and track maintenance and older methods employed where full mechanical equipment is not available are also explained.

462 pages, Cloth, 4½x7¼, Illustrated, $5.00
SIMMONS-BOARDMAN PUBLISHING CORP.

PETROLEUM PRODUCTION

By Park J. Jones

The production of oil, condensate and natural gas may be classified under mechanics of production; the optimum rate of production; reserves and well spacing; condensate and natural gas production; oil production, primary methods and oil production, secondary methods.

The first volume of a series of five under the Petroleum Production title, to be published at intervals is now off the press. It is devoted to the Mechanics of Production: oil, condensate and natural gas. The book sets out for consideration a system of mechanics of producing oil and condensate prior to the breakthrough of displacing fluids into producing wells. It can be shown that higher oil and condensate recoveries are achieved by producing as much oil and condensate as possible prior to the breakthrough of displacing fluids. Furthermore, it can be shown that the cost per barrel of production is least when maximum recoveries are achieved prior to the breakthrough of water or gas into producing wells.

231 pages, Cloth, 6x9, Illustrated, $4.50
REINHOLD PUBLISHING CORP.

NEW CITIES FOR OLD

By Louis Justement

In this book, city building, in terms of space, time and money, is carefully and thoroughly described. The book is an important and completely realistic new study of city planning and urban redevelopment illustrating the problems of economics, politics, administration, finance and design which together must be solved in order to achieve cities satisfying our sense of order, efficiency and beauty.

The book seeks to understand and explain some of our most baffling social, economic and planning problems, and reach solutions integrating the respective responsibilities of economists, public officials, realtors, architects, builders, bankers, lawyers, labor leaders and politicians.

Here is an intelligent, energetic, practical review of one of the most pressing problems of modern times, and in particular, the immediate post-war period. It proposes a dynamic program of improvement and development based on logical deductions arising from the several needs and challenges of the day.

232 pages, Cloth, 7¼x10, Illustrated, $4.50
McGRAW-HILL BOOK COMPANY

SURFACE ACTIVE AGENTS

By C. B. F. Young and K. N. Coons

The theoretical aspects of surface tension, its application to industrial fields, effects of surface active agents, and the relation between surface tension and other physical properties of matter are treated in detail in the first part of this book.

The rest of the book deals with diverse branches of industries in which surface active agents are used, and contains many typical formulae which will facilitate the formulation of emulsions and other products based on the utilization of surface active agents.

Methods for the determination of surface tension are described and apparatus used are illustrated. A comprehensive alphabetical list of wetting and other surface active agents, giving also the chemical composition, the industrial use, as well as name and address of the manufacturers, will prove of considerable value to chemists and other workers of many industries.

382 pages, Cloth, 5¾x8½, Illustrated, $6.00
CHEMICAL PUBLISHING COMPANY

What's New For Engineers

Requests for further information concerning any item mentioned under this heading will be promptly referred to the manufacturer. It would be appreciated if inquiries be addressed on professional or company letterhead.

Send Inquiries Direct to American Engineer,

#6 Church Street, New York, N. Y.

NEW AIR CONDITIONING UNIT

A self-containing room air conditioning unit, which cools, filters, dehumidifies, as well as ventilates, is being manufactured by this company. The new unit. of window-type, has a ½ hp motor-driven hermetically sealed, twin-cylinder, refrigerant compressor, which with the condensing coil is the section of the cabinet located outside the window. The room-side section of the cabinet contains filter, cooling coil, outlet duct and motor-driven fan. The equipment is enclosed in an attractively designed metal cabinet 22½" wide, 34½" long and 13-5/8" high. The grained and clear-lacquered cabinet has several features, including insulation against heat and sound by a one-inch thick lining of fibre glass, an air filter easily accessible for changing through a removable cover on the front and special attachments for flush fitting and balanced weight. The construction of the statically and dynamically balanced summer air conditioning unit assures the minimum service requirements. The conditioning unit is controlled by a thermostatic expansion valve including a pressure limiting feature. The thermostat opens and closes the valve, varying the refrigerant flow according to the load under normal conditions. But when very hot days bring a peak load, the compressor overload protection device would be constantly shutting off the unit under this arrangement were it not for the pressure limiting feature built into the valve. When the load reaches a certain peak, this feature keeps the unit running constantly. Complete details are available.

For further information address American Engineer, reference No. 520.

PLASTICS FOR LIGHT CONDITIONING

A 12-page booklet entitled "Plastics for Light Conditioning" describing the uses of plastics for reflectors and shades has just been published by this company. The illustrated booklet lists all models now available from this manufacturer.

For further information address American Engineer, reference No. 521.

HEAT TRANSFER APPARATUS

A condensed and self-indexed bulletin on heat transfer apparatus for chemical process work has just been published by this company. The bulletin illustrates and concisely describes more than twenty different types of evaporators, heaters, coolers, condensers and heat exchangers for liquids, vapors, and gases of all kinds. Units with finned heat transfer surfaces as well as those with bare tubes are included. Copies of this bulletin may be obtained.

For further information address American Engineer, reference No. 522.

MIDGET-SIZE HYDRAULIC MOTOR

Production of a new type of industrial motor, combining high starting torque with turbine-smooth power, has been announced by this company. This development, known as the superdraulic triport motor, parallels the superdraulic line of high pressure hydraulic pumps, making available a perfectly balanced combination of pumps and motors, each designed to insure efficient operation when combined as a complete power transmission system. According to the company this is the first time in the history of hydraulic devices that ample power for most machine applications had been available from so compact a unit —the 47 hp motor is only 10½" in diameter and light enough to be easily handled by one man. Torque range is as high as 200 lbs. ft. The motor is available in two types, one rated at 26½ gpm with 3,500 psi, input at 1,200 rpm; the other at 19 gpm with 5,000 psi at 1,200 rpm. The newly-announced motor is said to hold many advantages for industrial machine applications, including infinitely variable speed control, forward and reverse, by means of a convenient finger volume control valve; starting without clutches; and perfect control of acceleration and deceleration. Because of its unique design, which provides 66 power strokes per revolution, the motor is said to have turbine smoothness.

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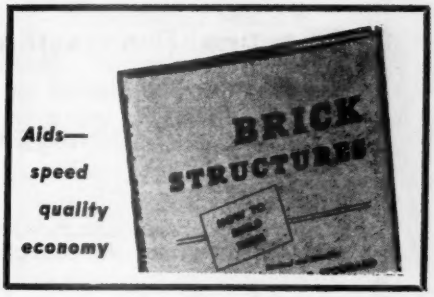

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NEW PRESSURE RELIEF VALVE

This company has just designed a new Pressure Relief Valve that maintains a pre-determined pressure by relieving any excessive pressures that may take place in fuel and hydraulic lines. The manufacturer states that the valve can easily be set to the desired pressure, at any time, without interrupting its operation, by means of an outside adjusting screw. This eliminates the necessity for disconnecting either inlet or outlet and makes possible inspection of the entire valve assembly without disconnecting it from the main line. These new Pressure Relief Valves are available for pressures ranging from 5 pounds to 100 pounds per square inch in units having individual ranges of approximately 15 pounds per square inch. Inlet and outlet are in a straight line. Over-all dimensions are: Length 2-7/8"—Width—7/8"—Height—2"—Weight 4 oz.

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NEW PROTECTIVE COATING

The manufacturer states it is fast becoming indispensable in the laboratory. This new thermosetting compound has an oil resistant, synthetic rubber and synthetic resin base. Intermittent steam, hot and cold water, salt, alkaline and most acid solutions have but little effect on this new material. In metallurgical laboratories where surfaces are exposed to the fumes and direct splashing of sulphuric, hydrochloric and other organic acids, it has proved its ability to withstand the deteriorating effect of these chemicals and maintain the hard, smooth and clean surface desired for laboratory use. The manufacturer states that it dries rapidly, can be applied with a brush, spray gun or by dipping — and when dry, remains impervious to the many destructive agents which attack ordinary paints. It has been tested under direct flame up to 400 degrees temperature for short periods of time without blistering, charring or peeling. Abrasion resistance is high, for when reduced 100 per cent, ten spray coats approximately .005" thick withstands 2,000 wear cycles on the Tabor Abraser, using a one-kilogram weight arm and Abrasive Wheel No. CS17. Test panels of Alcad, Steel and Tin, coated. 005" thick, submitted to minus 40° F. for one hour, were subjected to 180 degree bend test of approximately 1/8" radius. This procedure was repeated, subjecting the panels to plus 180° F. No evidence of checking or cracking or loss of adhesion took place.

For further information address American Engineer, reference No. 525.

NEW, IMPROVED POSTWAR CONTINUOUS PRINTERS

New improved "B-2" and "B-3" table-type Continuous Printers are announced. These new streamlined printers offer a number of postwar improvements that make possible faster exposure, finer reproduction, and greater operating efficiency . . . for intermittent or continuous duty. They expose direct process black and white prints, blue prints, and ammonia-type prints, from tracings, charts, drawings, letters, etc. They produce clear, sharp, true-to-scale prints up to 44 inches wide in a continuous operation; from cut sheets or roll stock, in any lengths, at speeds from 6 inches to 42 inches per minute.

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For further information address American Engineer, reference No. 526.

AUTOMATIC HEATING CONTROL SYSTEM

A new booklet describing this company's automatic heating control system has just been published. In addition to describing the application to the more conventional methods of heating such as steam, warm air and hot water, the book also discusses its application to zone control, radiant panel heating, solar heating, electric heating and air conditioning. Copies are available.

For further information address American Engineer, reference No. 527.